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Abstracts



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Genetics, genomics and proteomics

Abstract No: 1

Title: KIR genes in Portuguese patients with psoriasis vulgaris

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Text:

Introduction: Psoriasis vulgaris (PV) is an immune mediated disease with a complex multifactorial etiopathogenesis with multiple susceptibility genes involved. The genes most consistently implicated are alleles of the Human Leukocyte Antigen (HLA) loci, particularly HLA-Cw*. It's effect is important but partial and it may interact with other candidate genes. HLA-C is recognized by Natural Killer (NK) and Natural Killer-T cells (NKT) through the Killer Immunoglobulin-like Receptors (KIR). Recent genetic association studies implicated KIR genes (particularly KIR2DS1, -2DS2 and -2DL5) in the susceptibility to psoriasis vulgaris and psoriatic arthritis. Objectives: Determine if KIR receptors and the HLA-C ligands epitopes (C1 and C2) for the corresponding KIRs are associated with development of Psoriasis in these patients.

Patients and Methods: Eighty-four unrelated patients with psoriasis were genotyped for the KIR genes and were compared with a control group of 121 healthy controls selected from the same region.

Results: Lower frequencies of KIR2DS5 and KIR3DS1 were found in psoriatic patients compared to controls. All other KIR gene frequencies were similar. When KIR genotype and HLA-C ligands interaction was analyzed it was not found any association.

Discussion: This study suggests that some KIR alleles may exert a protective effect to Psoriasis. Therefore, KIR2DS1, a major susceptibility gene to psoriasis in the Caucasian and Japanese population, was not a risk gene in our population. In fact, the KIR2DS1 frequency was lower than that in controls.

Abstract No: 2

Title: A genome-wide linkage scan of familial psoriasis: linkage to chromosome 2

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Text:

Psoriasis is a multifactorial disease triggered by the involvement of some environmental factors in individuals with a particular genetic background. In Tunisia, the prevalence of this dermatose varies between 0,51% until 1,7 % according to the slice of age. To date, independent genome wide scans using linkage analyses have identified at least 19 distinct psoriasis susceptibility loci. To identify the genetic basis of psoriasis in Tunisian population, we carried out a genome scan on a set of 7 multiplex families using 11,555 single nucleotide polymorphisms (SNP) included in the 10 K assay. Our genotypes were analysed using nonparametric statistical method integrated in the genehunter package software. Best NPL and p-value were obtained with SNP rs 1517286 (NPL= 3.36300, p= 0.003906) in chromosome 2, other suggestive NPL scores were obtained with chromosome 1, 4, 5 and 7. Our result suggested the linkage of our Tunisian psoriatic multiplex families to chromosome 2. This locus is already reported to be linked to psoriasis in

Chinese population. This result needs to be confirmed by the use of a larger family set and a case/ control population study.

Abstract No: 3

Title: Heritability in psoriatic arthritis in five generations. The Reykjavik psoriatic arthritis study.

Authors: Bjorn Gudbjornsson¹, Thorvardur Jon Love², Ari Karason³

Affiliations: ¹ University Hospital, Iceland ² Harvard University, Boston, United States ³ deCODE Genetics, Iceland

Text:

Background: Psoriasis and psoriatic arthritis have strong heritability according to several reports, based in most cases on hospital cohorts and first degree relatives, where SI or RII has been calculated.

Objectives: We have studied the prevalence of psoriatic arthritis in Reykjavik, Iceland, in a population based cohort (1) and with the Icelandic genealogy database we are able to estimate the risk ratio for relatives spanning five generations (seven meioses).

Methods: The Icelandic genealogy database and population-wide data on all living Icelanders diagnosed as having psoriatic arthritis (n=220) and living in Reykjavik, who previously had taken part in an epidemiology study on the prevalence of psoriatic arthritis in Reykjavik (1) were included in the study. Their national identification numbers were linked with information from the genealogy database. Thereafter, the data was used to estimate the risk ratio of developing psoriatic arthritis in first- to fifth-degree relatives of patients with psoriatic arthritis. The mean kinship coefficient (KC) for psoriatic arthritis was also calculated. The control population for disease risk calculations for risk ratio and for KC comprised 1,000 and 100,000 sets of matched Icelandic subjects for each proband, respectively.

Results: First-, second-, third- and fourth-degree relatives of patients with psoriatic arthritis had risk ratios of 39, 12, 3.6 and 2.3, respectively (all p-values < 0.0001), indicating a significantly increased risk of developing psoriatic arthritis in relatives of patients, suggesting a strong heritable factor, while the fifth degree relatives to the 220 index cases with psoriatic arthritis only had a risk ratio of 1.2 (p=0.236). Calculation of the kinship coefficients (KC) confirmed these patterns of familial risk with significantly elevated KC values of 5.0, 3.4, 1.7, 1.3, 1.0, 0.8 and 0.7 for the first seven excluded meioses (all p-values < 0.0001).

Conclusion: Patients with psoriatic arthritis in Reykjavik, Iceland are significantly more related to each other than randomly sampled control subjects. This is in agreement with previous reports on the heritability of psoriatic arthritis, but the present study has more power and extends over larger familiar cohorts than previous studies. These findings suggest that more than one genetic variant underlies the risk of psoriatic arthritis, while unknown environmental factors likely play a significant role in the pathogenesis of psoriatic arthritis.

References: 1. TJ Love, B Gudbjornsson, JE Gudjonsson H Valdimarsson. Psoriatic Arthritis in Reykjavik, Iceland: Prevalence, Demographics, and Disease Course. J Rheumatol 2007;34(10):2082-8.

Abstract No: 4

Title: The molecular profile of psoriatic skin in responders to ustekinumab or etanercept following twelve weeks of treatment: Results from the ACCEPT Trial.

Authors: James Krueger¹, Katherine Li², Frédéric Baribaud², Mayte Suarez-Farinas¹, Carrie Brodmerkel²

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Text:

Aims: To assess the impact of p40 cytokine (IL-12/IL-23) or TNF-alpha blockade on resident and inflammatory cells and on the expression of gene circuits that may drive chronic immune activation and inflammation in the skin

Methods: In ACCEPT, a randomized, active-controlled study, the efficacy of etanercept and ustekinumab were compared in 903 patients with moderate-to-severe plaque psoriasis through wk12. Skin biopsies were performed in a subset of patients at baseline, wks1 and 12. Microarray analyses (Affymetrix U133+2 array) comparing non-lesional skin (n=85) to lesional skin (n=85) at baseline showed several thousand probe sets differentially expressed (>2-fold change FDR, p<0.05) in lesional skin.

Results: Patients responding to each agent (>=PASI75, n=21 for etanercept, n=19 ustekinumab) had significant changes in ~4000 transcripts compared to untreated lesions, indicating significant resolution of pathological gene circuits. A set of 2922 transcripts, which includes S100 genes, keratins 6/16, and innate defense products (cytokine-modulated genes in keratinocytes), were commonly regulated by ustekinumab or etanercept. The top ten genes down-regulated at wk12 by ustekinumab overlap with 9 of the top ten genes down regulated by etanercept at wk12; only 2 of the top ten genes up-regulated overlap (NTRK2, THRSP) in this comparison. The genes upregulated by ustekinumab include a number of keratin structural proteins indicating a unique effect of ustekinumab on keratinocytes.

Conclusion: Elucidation of common and unique effects ustekinumab and etanercept define critical pathways involved in psoriasis pathogenesis and a successful therapeutic response. Broad genomic assessments provide an independent way to judge the extent to which disease pathology can be reversed by effective therapeutics.

Abstract No: 5

Title: Association between the PTPN22 +1858 C/T polymorphism and Psoriatic Arthritis

Authors: Kristina Juneblad¹, Maritn Johansson², Solbritt Rantapää Dahlqvist², Gerd-marie Alenius²

Affiliations: ² Dept. of Rheumatology, Umeå, Sweden

Text:

Aims: The aim of this study was to investigate a possible association between the PTPN22 +1858 C/T single nucleotide polymorphism (SNP) (rs 2476601) and a SNP in the interferon regulatory factor-5 (IRF-5) gene (rs 3807306) in patients with Psoriatic Arthritis (PsA) compared with population based controls. Previous studies on PTPN22 +1858 C/T polymorphism in PsA are inconclusive and the IRF-5 gene has not previously been studied. The polymorphisms were also evaluated for the phenotype of the disease.

Methods: 280 patients (141m/139f, mean age 52.0 +13.1 years) with PsA (Moll & Wright-criteria) were clinically and laboratory examined. Rheumatoid factor and anti-cyclic citrullinated peptide antibodies were determined using ELISAs. DNA was extracted using a standard salting out method and genotyped for the SNPs rs2476601 and rs 3807306 by TaqMan® assay using an ABI PRISM 7900HT sequence detection system. Allelic frequencies were determined and compared with 726 controls randomly selected from the Medical Biobank of northern Sweden.

Results: The carriers of the risk allele SNP rs2476601 (+1858C/T) in the PTPN22 gene showed a significant association with patients with PsA compared with controls. (p=0.009, OR 1.52 (95%CI 1.12-2.08)), without sex differences. There was no association with the SNP rs3807306 (A/C) in the IRF-5 gene (p=0.72, OR 1.08 (95%CI 0.76-1.53)).

Conclusion: In this study the +1858T allele in PTPN22 gene, which previously has been shown to be associated with several autoimmune diseases, also was associated with PsA.

Abstract No: 6

Title: Simple and rapid screening for HLA-Cw*06 in psoriatic patients from Poland

Authors: Aneta Szczerkowski Dobosz¹, Aneta Szczerkowska Dobosz¹, Krzysztof Rebala¹, Joanna Wysocka¹

Affiliations: ¹ Medical University of Gdansk, Poland

Text:

The aim of this study was to work out and optimise a DNA typing procedure, suitable for simple and rapid screening of HLA-Cw*06 in a large-scale analysis. At first stage PCR-SSP was used for specific detection of HLA Cw*06. Subsequently, PCR with analysis of restriction fragment length polymorphism (PCR-RFLP) was applied in case of HLA Cw*06+ individuals to distinguish homo- and heterozygotes. Finally, the Cw*06 homozygotes were screened for unspecific digestion with the use of PCR-SSP utilising a degenerated reverse primer. This procedure was applied in a case-control study of 383 patients with psoriasis developed after 30 y, 30 patients with pustulosis palmo-plantaris (PPP) and 146 controls. The results showed that this method could be easily applied for rapid identification of HLA Cw*06, as well as for its zygosity status. A significant difference in the frequency of HLA Cw*06 allele between patients and controls was observed ($P = 0.017$). Detailed examination of the age of disease onset among psoriatics revealed its negative correlation with the HLA-Cw*06, and showed that psoriasis developing after 44 y does not completely correlate with higher incidence of HLA Cw*06. Since a role of this allele in the genetic background of psoriasis with earlier onset cannot be neglected, we propose that patients with psoriasis diagnosed as late as before 45 y should be taken into consideration for diagnostic Cw*06 typing. No difference in HLA Cw*06 frequency was observed between PPP and controls ($P=1,000$), which indicates its different from psoriasis background.

Abstract No: 7

Title: A Quantitative analysis of digitopalmar dermatoglyphics in 400 Psoriasis and Psoriatic arthritis patients from Croatia

Authors: Miljenko Cvjeticanin¹, Jajic Zrinka², Jajic Ivo²

Affiliations: ¹ Zagreb Rehabilitation Center, ² University Department of Physical Medici, Croatia

Text:

We analysed dermatoglyphs of hands in 140 psoriatic patients (70 males, 70 females), and 260 psoriatic arthritis patients (130 males, 130 females), with a view to differential diagnostics between psoriasis and psoriatic arthritis from the one side and among five psoriatic arthritis clinical subgroups (Wright and Moll), from the other side. Between 14th and 25th week of intrauterine dermatoglyphics development on hands, there is possibility that this period, the simultaneous pathogenetic mechanism operated on dermatoglyphic drawing, and on group of genes responsible for psoriasis and psoriatic arthritis. The study included 25 dermatoglyphic traits. The data obtained were compared with recorded in a control group of 400 (200 males, 200 females) pairs of imprints of phenotypically healthy adults from the Zagreb area. Statistically significant differences were found in male psoriatics to control in 16 variables, female psoriatics to control in 6 variables, male psoriatic arthritis patients to control in 10 variables, and female psoriatic arthritis patients to control in 9 variables. In male psoriatics to male psoriatic arthritis patients in 15 variables, and female psoriatics to psoriatic arthritis patients in 14 variables. Statistically significant differences were found to control among male psoriatic arthritis in 67 variables, and among female psoriatic arthritis to control in 69 variables. Among five clinical subgroups of male psoriatic arthritis patients in 122 variables and among five clinical subgroups of female psoriatic patients in 130 variables. We could

say that dermatoglyphics are important tool for genetics in psoriasis and psoriatic arthritis, and in their differential diagnostics.

Abstract No: 8

Title: HLA and KIR gene frequency in a multiethnic psoriasis and psoriatic arthritis patients.

Authors: Sueli Carneiro¹, Flavia Cassia¹, Danielli Cristina Oliveira², Maria Teresa Marques², Luis Cristovão Porto², Carolina Portela¹, Marcia Ramos-e-Silva¹

Affiliations: ¹ Federal University of Rio de Janeiro, ² State University of Rio de Janeiro, Brazil

Text:

Aims: To type HLA classes I and II and KIR genes of patients with psoriasis vulgaris, and correlate HLA markers with epidemiological and evolutionary aspects.

Materials and Methods: Fifty-five patients were evaluated and questioned about ethnic background, family and disease history and compared with 134 bone marrow donors as controls. Allelic typing of class I and II and KIR genes were determined by PCR-SSP and PCR-SSO hybridization.

Results: Mean age was 42.4 years-old, 41.8% females and 58.2% males. HLA-B*57 was found in 23.6% of patients and 7.5% of controls ($p=0.00200$; OR= 3.8381) and HLA-Cw*06, in 29.1% of patients and 16.4% of controls ($p=0.04832$; OR=2.0886). HLA-B*57 and HLA-Cw*18 were significantly present in patients with arthritis ($p=0.00104$; OR=6.6769 e $p=0.00269$; OR=16.50, respectively). HLA-B*57 was significantly present in patients with history of erythroderma ($p=0.00548$; OR= 5.1059), as was HLA-Cw*06 ($p=0.02158$; OR= 3.0545). HLA-B*57 was frequent in patients with history of hospital admission ($p=0.00094$; OR= 7.8909) and systemic treatment ($p=0.00011$; OR= 5.3733). Haplotype HLA-A*02 B*57 Cw*06 DQB1*03 DRB1*07 was the most common among the patients ($p=0.00069$; OR= 3.528). KIR2DL2 was found in 53.0% of controls and 29.1% of patients ($p=0.00276$; OR= 0.3634).

Conclusions: HLA-B*57 and HLA-Cw*06 indicated risk in the patients group. KIR2DL2 was high in controls, indicating protection. HLA-Cw*18 and KIR2DL2 were not previously associated with psoriasis. Supported by government funds (FAPERJ) and Capes).

Pathophysiology and Immunobiology

Abstract No: 9

Title: Seric and synovial fluid values of cytokines in psoriasis arthritis and rheumatoid arthritis patients

Authors: Caius Solovan¹, Camelia Ciacli²

Affiliations: ¹ University of Medicine and Pharmacy, ² West University, Immunology, Arad, Romania

Text:

Aim: The aim of our study was to compare the values of pro- and anti-inflammatory cytokines in psoriasis arthritis (PsoA) and rheumatoid arthritis (RA) patients.

Methods: We determined pro-inflammatory (IL-1, IL-6, TNF- α) and anti-inflammatory (IL-4, IL-13) cytokines in serum and synovial fluid at 27 patients with PsoA (CASPER CRITERIA) and 21 patients with RA based on American College of Rheumatology criteria (ACR). The cytokines were determined in blood and synovial fluid by means of the ELISA technique.

Results: The serum levels in PsoA patients were: IL-1 mean range 4.6±2.45 pg/ml; IL-6 mean range 11.25±4.75 pg/ml; TNF α mean range 3.5±1.45 pg/ml. RA patients had following results of seric pro-inflammatory cytokines: IL-1 mean range 6.6±2.48 pg/ml, IL-6 mean range 18.13±1.95 pg/ml, TNF- α mean range 5.75±2.48 pg/ml. The levels of pro-inflammatory cytokines in the synovial fluid of PA patients was: IL-1 mean range 4.8±2.46 pg/ml, IL-6 mean range 21.4±10.3 pg/ml and TNF- α mean range 10.5±4.75 pg/ml. The RA group had following values of pro-inflammatory cytokines in the synovial fluid: IL-1 mean range 5.2±2.48 pg/ml, IL-6 mean range 28.5±8.75 pg/ml and TNF- α mean range 26.21±17.01 pg/ml. The seric level of IL-4 was undetectable in majority of PsoA and RA patients; in the synovial fluid values between 0.20 and 0.50 pg/ml were detected (PsoA); the patients with RA had mean value of 0.63±0.09 pg/ml. The seric level of IL-13 in PsoA had mean range of 3.22±1.45 pg/ml; in the synovial fluid mean range value 5.8±0.45 pg/ml. In RA IL-13 had mean seric values of 10.2±1.48 pg/ml, and in the synovial fluid mean values of 6.7±1.08 pg/ml.

Conclusion: The profiles of cytokines were similar but at lower levels in PsoA suggesting involvement of other pathways and cytokines.

Abstract No: 10

Title: Th-17 cells in psoriatic disease: Studies in developing psoriatic lesions and psoriatic arthritis

Authors: Siba Raychaudhuri¹, Smriti Raychaudhuri²

Affiliations: ¹ University of California, Davis, ² VA Medical Center Sacramento, United States

Text:

Aims: Here we carried out in vivo/in vitro studies to identify the Th17 cells in psoriasis and psoriatic arthritis (PsA) and determined their functional significance. In developing psoriasis lesions we have studied the kinetics of migration of Th17 cells.

Methods: Th17 cells were studied in the developing psoriasis skin lesions (n= 8), in the synovial tissues of PsA (n=8) and osteoarthritis (OA, n=12) patients. Mononuclear cells of synovial fluid (SFMC) and PBMC in PsA/OA (n=8) were studied to identify the IL-17+ T cells and their phenotypes by Hi-D FACS analysis after stimulation with CD3/CD28 antibody. IL-17 induced production of matrix metalloproteinase (MMP-3) and cytokines was determined in cultured FLS from PsA/OA (n=3) patients.

Results: PsA synovial tissues and psoriasis lesions were enriched with the Th17 cells. In the developing psoriasis lesions, Th17 cells migrated to the papillary dermis by the third week of disease onset. In the PBMC of PsA, OA and in the SFMC of OA IL-17+ CD4+ T cells were <1%; whereas a significant enrichment of IL-17 ϵ -producing CD4+ T cells (7.53±.2%) was noticed in the synovial fluid of the PsA patients. Compared to OA, recombinant IL-17 induced higher levels of IL-6, IL-8, and MMP-3 in PsA derived FLS.

Conclusions: Skin, synovial tissue, and synovial fluid of patients with psoriasis and PsA are enriched with Th17 cells. Studies described here support that IL-17/IL-17R contribute to an unbalanced production of various proinflammatory cytokines and thus participate in the connective tissue and epithelial tissue remodeling in psoriatic disease.

Abstract No: 11

Title: SCID mouse-human skin chimera: A unique animal model for novel drug discovery of psoriasis and autoimmune diseases.

Authors: Siba Raychaudhuri¹, Smriti Raychaudhuri²

Affiliations: ¹ University of California-Davis, ² VA Medical Center Sacramento, United States

Text:

Aims: We have modified and standardized the SCID mouse-psoriasis skin

chimera to develop immune-based therapies. Here we will provide data about this model and its usefulness for development of novel drugs for psoriasis and other autoimmune diseases.

Methods: Mouse-Human xenografts were prepared by transplanting shaved psoriasis plaques on the SCID mouse (n=85). Biopsies were taken at different time points to identify the disease status.

Results: Following molecules were maintained for 24 weeks in the transplanted plaques: ICAM, CXCR3, Fractalkine, IL-17, IL-8, CD3, CD4, CD8, HLA-DR, CD40, OX40R, CD80, CD86, Kv1.3, K16, Ki67, substance P, NGF/NGF-R. This indicates that proliferative/inflammatory cascades of psoriasis remain intact in the transplanted plaques. To have a proof of the concept that antagonism of the T cell co-stimulatory molecules is a therapeutic option of autoimmune diseases, we designed a double-blinded, placebo controlled study using the xenograft model. The transplanted psoriatic plaques on the SCID mice (n=12) were treated with CTLA4IgG (10mg/kg/week). Cyclosporine (4mg/kg) treatment was used as a positive control group (n=6) and untreated plaques (n=12) were negative controls. Marked reduction of epidermal thickness lymphomononuclear cells and HLA-DR expression was observed in the plaques treated with CTLA4IgG and cyclosporine.

Conclusion: Manipulation of the CD28-B7 co-stimulatory system by CD28 antisense nucleotide and CD28 silence antibody also induced significant histological improvement. We are in the process of developing immune-based therapy of T cell mediated autoimmune diseases by targeting the various regulatory molecules of T cells activation, such as CD28, CD80, CD86, CD40, CD40R, OX40, OX40R and Kv1.3.

Abstract No: 12

Title: Characterization of the inflammatory microenvironment during acute guttate psoriasis in blood and skin.

Authors: Liv Eidsmo¹, Mona Ståhle¹

Affiliations: ¹ Karolinska Institutet, Sweden

Text:

Aims: Twenty percent of psoriasis patients present with guttate psoriasis (GP) characterised by sudden onset of small plaques covering large areas of the body. The cellular composition of chronic skin inflammation in psoriasis has been investigated in a number of studies and a complex dermal cellular infiltrate containing T cells, macrophages and several different types of dendritic cells has been reported. We were interested to investigate if the inflammatory infiltrate in GP differs from chronic disease.

Methods: A prospective study of the inflammatory environment during guttate psoriasis has been initiated. Skin biopsies and blood cells from patients presenting with chronic and acute psoriasis will be collected at several different time-points after diagnosis. The cellular infiltrate in the skin will be carefully analysed by FACS and confocal microscopy with focus on phenotype and activation status of dendritic cells and T cells.

Results: Preliminary results from histological examinations of cryopreserved biopsies collected from first incidence untreated GP show a variation of inflammatory patterns possibly reflecting the initial stages of the developing inflammation in skin. Loose T cell (CD3+) infiltrations as well as organised lymphoid tissue were detected. The number of dermal myeloid dendritic cells was lower in GP compared with chronic plaques. These data suggest that the inflammation in GP is distinct from chronic plaque.

Conclusions: We propose that guttate psoriasis is a suitable clinical manifestation of psoriasis to explore early events and triggering factors of tissue immunopathology.

Abstract No: 13

Title: Visualisation of Langerin-expressing cells in the skin during acute and guttate psoriasis.

Authors: Milena Macitelli¹, Mona Ståhle¹, Liv Eidsmo¹

Affiliations: ¹⁾ Karolinska Institutet, Sweden

Text:

Aims: Langerhan's cells (LCs) are dendritic cells (DCs) of the skin residing in the epidermis. Upon stimulation and maturation LCs migrates from the skin to draining lymph nodes. In psoriasis, conflicting data regarding the number of epidermal LCs have been put forward and dysfunctional LC migration has been proposed. Recent findings in mice have shown that a subgroup of dermal DCs express Langerin. We were interested to investigate the pattern of Langerin staining in dermis and epidermis in biopsies from well defined psoriatic patients with wide-spread sudden onset of disease (guttate psoriasis) compared to chronic lesions.

Methods: Skin biopsies from perilesional skin were collected and cryopreserved from guttate and chronic psoriasis and healthy skin. Langerin expression was analysed with immunofluorescence. The number of Langerin+ cells in dermis and epidermis was enumerated by microscopic counting and the localisation of Langerin+ cells in relation to infiltrating T-cells and myeloid DCs was documented with a Leica confocal microscope.

Results: An interesting pattern of langerin+ staining in dermis was detected in both acute and chronic psoriasis in close proximity infiltrating T cells.

Conclusions: Our results suggest that LCs efficiently migrate from epidermis to dermis early during the psoriatic development. The egress from dermis through efferent lymphatics may be affected in psoriasis leading to accumulation of LCs in dermis. Alternatively, Langerin+dermal DCs could be present in human skin during inflammatory disorders such as psoriasis.

Abstract No: 14

Title: The role of human microRNA-125b in psoriasis

Authors: Ning Xu¹, Tianling Wei¹, Ahmad Pazirandeh¹, Mona Stähle¹, Enikő Sonkoly¹, Andor Pivarcsi¹

Affiliations: ¹⁾ Karolinska Institutet, Sweden

Text:

Aims: MicroRNAs (miRNAs) are recently discovered regulators of gene expression, which play important roles in both physiological and pathological processes. Psoriasis is a common chronic inflammatory skin disease. Our studies try to identify the potential role(s) of the miRNA, specifically miRNA-125b, in psoriasis.

Methods: miRNA in situ hybridization, quantitative real-time PCR, cell culture, transfection of miR-125b precursor (overexpression) and inhibitor (knock-down), Signal Transduction Pathway Finder array.

Results: By doing genome-wide screen for miRNAs, we have identified a specific miRNA expression profile in psoriasis. We found miRNA-125b is significantly down-regulated in psoriasis compared to healthy skin (Sonkoly et al., 2007). In situ hybridization data showed that this decrease mainly results from the reduced expression of miR-125b in keratinocytes. Furthermore, we over-expressed / knock-downed miR-125b in primary keratinocytes and the representative genes of 18 signal transduction pathways were analyzed.

Conclusions: The suppressed expression of miR-125b in psoriasis skin may contribute to the pathogenesis of psoriasis. The possible effects of aberrant miR-125b expression in proliferation, differentiation and apoptosis of keratinocytes will be further studied. Hopefully, miR-125b could become a novel therapeutic target for psoriasis.

Abstract No: 15

Title: Protein kinase C-dependent upregulation of miR-203 during keratinocyte differentiation

Authors: Enikő Sonkoly¹, Enikő Sonkoly¹, Tianling Wei¹, Elizabeth Pavez Lorie², Hans Törmä², Mona Stähle², Andor Pivarcsi¹

Affiliations: ¹⁾ Karolinska Institutet, ²⁾ Uppsala University, Sweden

Text:

Background: Terminal differentiation of keratinocytes is a multistep process that requires a coordinated program of gene expression. Psoriasis is characterized by altered keratinocyte differentiation. To date, virtually nothing is known about the expression and function of a novel class of non-coding RNA genes, microRNAs (miRNAs) in this process.

Aims: We aimed to explore the possible involvement of miRNAs in keratinocyte differentiation.

Methods: miRNA expression profiling (TLDA microRNA arrays), miRNA real-time PCR, in vitro differentiation models using primary keratinocytes, cytokine stimulations, specific inhibitors of PKC and EGFR.

Results: Out of 365 miRNAs tested, 7 showed significant change between keratinocytes cultured in low or high calcium concentration. The highest-ranked up-regulated gene was miR-203, a miRNA we previously identified to be skin-specific and overexpressed in psoriasis. MiR-203 showed an 8.3-fold upregulation in terminally differentiated keratinocytes in comparison to low-calcium controls. MiR-203 was significantly upregulated in response to calcium and other inducers of keratinocyte differentiation such as 12-O-tetradecanoylphorbol-13-acetate (TPA) and vitamin D3. Differentiation-induced upregulation of miR-203 expression was blocked by treatment with selective inhibitors of protein kinase C, GF109203X and Ro31-8220. In contrast to inducers of keratinocyte differentiation, epidermal growth factor (EGF) and keratinocyte growth factor (KGF) suppressed miR-203 expression in keratinocytes below the basal level. Moreover, we found that miR-203 expression is remarkably resistant to regulation by inflammatory cytokines and microbial products.

Conclusion: These results show that miRNAs are regulated during keratinocyte differentiation and identify miR-203 as a novel, non-coding RNA marker of keratinocyte differentiation. Moreover, miR-203 may regulate keratinocyte differentiation in psoriasis.

Abstract No: 16

Title: Antineutrophil cytoplasmic antibodies - serologic marker in psoriatic arthritis

Authors: Hanna Przepiera-bedzak¹, Iwona Brzosko¹, Katarzyna Fischer¹, Marek Brzosko¹

Affiliations: ¹⁾ Pomeranian Medical University, Poland

Text:

Objectives: To assess pANCA and cANCA in order to determine the role of autoimmunity in the pathogenesis of psoriatic arthritis.

Material and Method: We studied 79 patients (43 female, 36 male) with PsA and 21 patients (19 female, 3 male) with SAPHO syndrome. We recorded: age, sex, disease duration. We assessed: BASFI, BASDAI, BASG, BASMI, SF-36, HAQ and PASI score. Blood was collected for analysis of ANCA, VEGF, EGF, FGfb and FGfc, CRP. The controls were 30 healthy persons matched on age and sex.

Results: Mean age of patients was 50,1 years in PsA group and 51,0 years in SAPHO group. Mean disease duration was 6,4 years in PsA group and 2,8 years in SAPHO group. Positive ANCA were present in 16,5% PaA patients. No one in SAPHO group had positive ANCA. In group of positive ANCA: 11 patients had pANCA, 1 patients had cANCA, 1 patient had positive both pANCA and cANCA. In group with positive ANCA: 11 were female, 2 - male, all had type II psoriasis, 6 patients had psoriatic nail involvement, the joint pattern was: polyarthritis 8, DIP arthritis 3, spondylitis 2. PsA patients with positive ANCA compared with group of PsA patients with negative ANCA were older (p=0,03), had higher disease activity measured by CRP (10,9 mg/l v. 6,1 mg/l; p=0,04) and ESR (20,5 mm/h v. 13,4 mm/h; p=0,04) and higher mean value of FGfb (2,71 pg/ml v. 0,47 pg/ml; p=0,007).

Conclusion: We found that ANCA could be a possible serologic marker in Psoriatic Arthritis.

Abstract No: 17

Title: The potential role of angiogenic cytokines: VEGF, EGF, FGFb and FGfa in psoriatic arthritis

Authors: Hanna Przepiera-bedzak¹, Iwona Brzosko¹, Katarzyna Fischer¹, Marek Brzosko¹

Affiliations: ¹ Pomeranian Medical University, Poland

Text:

Objectives: To examine serum levels of VEGF, EGF, FGFb and FGfa and to assess its potential role as markers of disease activity in psoriatic arthritis (PsA) patients.

Material and Method: We studied 80 psoriatic arthritis (PsA) patients and 18 SAPHO syndrome patients. We recorded: age, sex, disease duration. We assessed: BASFI, BASDAI, BASG, BASMI, SF-36, HAQ, PASI score. Blood was collected for analysis of VEGF, EGF, FGFb and FGFc, ESR, C-reactive protein (CRP). The controls were 15 healthy persons matched on age and sex.

Results: Mean age of patients was 50,1 years in PsA group and 51,0 years in SAPHO group. Mean disease duration was 6,4 years in PsA group and 2,8 years in SAPHO group. In PsA patients the peripheral arthritis had 61 patients, spinal involvement had 19 patients. In PsA group we found positive correlation of VEGF and disease duration ($R=0,29$; $p=0,007$), BASFI score ($R=0,25$; $p=0,03$) and CRP ($R=0,22$; $p=0,04$) level. The mean value of VEGF was significantly higher in patients than in control group. The mean value of EGF was significantly higher in patients than in control group. There was no correlation of EGF with age, disease duration, CRP, ESR, indexes of disease activity. Positive result for FGFb was in 11,3% of PsA patients and in 5,6% of SAPHO patients. Positive result for FGfa was found in 22,5% of PsA patients and in 22,2% of SAPHO patients. In healthy control group FGFb and FGfa were not found.

Conclusion: We confirmed increased angiogenesis in psoriatic arthritis patients.

Abstract No: 18

Title: The expression of microRNA 203 during human skin morphogenesis

Authors: Tianling Wei¹, Törmä Hans², Hao Li², Andor Pivarcsi¹, Mona Stähle¹, Enikő Sonkoly¹

Affiliations: ¹ Karolinska Institutet, ² Uppsala University Hospital, Sweden

Text:

Background: MicroRNAs suppress the expression of protein coding genes by targeting mRNAs for translational repression or less frequently for degradation. We have previously identified miR-203 as a skin- and keratinocyte-specific microRNA upregulated in psoriasis.

Aims: To investigate the expression pattern of miR-203 during skin morphogenesis.

Methods: In situ hybridization for miR-203 using LNA-modified nucleotide probe was performed on frozen sections of human fetal skin from different gestational phases. P63 expression was analyzed in corresponding fetal skin sections by ABC-ELITE immunohistochemical staining. To explore the effect of miR-203 in the formation and structure of epidermis, human keratinocytes were transfected with precursors or inhibitors of miR-203 (to overexpress/suppress miR-203) for building up 3D epidermal equivalents. Immunohistochemical staining was performed for proliferation and differentiation markers.

Results: In situ hybridization revealed that miR-203 expression increases from 17 weeks of gestation. The expression of miR-203 was most pronounced in the suprabasal layers of the epidermis. In contrast, p63 was preferentially expressed in the basal layer of the epidermis. Overexpression of miR-203 in 3D epidermal equivalents leads to the premature expression of involucrin, an early marker of keratinocyte terminal differentiation, More-

over, the expression of involucrin was diminished in the basal layer of the 3D epidermal equivalent when miR-203 inhibitor was applied.

Conclusions: Our results suggest that miR-203 may play a role in epidermal morphogenesis during human skin development.

Abstract No: 19

Title: NF- κ B- and STAT3-dependent cytokine production by circulating CCR6+CD4+ Th17 cells is increased in psoriasis

Authors: Shinji Kagami¹, Heather Rizzo¹, Jennifer Lee¹, Yoshinobu Koguchi¹, Andrew Blauvelt¹

Affiliations: ¹ Oregon Health & Science University, United States

Text:

Both Th17 and Th1 cells have been implicated in psoriasis pathogenesis, but the relative importance of each cell type is unclear. The purpose of this study was to evaluate Th17 and Th1 cytokine production by circulating CD4+ T cells in untreated and treated psoriatics. CD4+ T cells were isolated from 10 untreated psoriatics, 5 patients receiving infliximab, and 11 healthy individuals, placed into culture overnight with PMA/ionomycin, and assessed by 7-color flow cytometry (CCR6, IL-23R, CD161, IL-17A, IL-22, IFN- γ , TNF- α). CCR6+CD4+ ($p<0.01$), IL-23R+CD4+ ($p<0.05$), CCR6+IL-17A+CD4+ ($p<0.01$), CCR6+IL-22+CD4+ ($p<0.01$), and IL-17A+IFN- γ -CD4+ ($p<0.01$) cells were markedly increased in psoriatics, indicating elevations in circulating Th17 cells utilizing a number of criteria to define these cells. IL-17A-IFN- γ +CD4+ ($p<0.05$) and IL-17A+IFN- γ +CD4+ ($p<0.05$) cells were also increased in psoriatics, indicating elevations in Th1 and double-positive Th17/Th1 cells, respectively, but to a lesser extent compared to Th17 cells. CCR6+CD4+ ($r>0.45$), IL-17A+CD4+ ($r>0.35$), and TNF- α +CD4+ ($r>0.45$) cell numbers correlated well with clinical disease activity. Infliximab therapy over time led to decreases in CCR6+CD4+ and CCR6+TNF- α +CD4+ cell numbers. NF- κ B inhibition by parthenolide and STAT3 inhibition by Stattic blocked cytokine production in CD4+ cells in a dose-dependent manner. This study reveals several novel observations with potential clinical implications: 1) both circulating Th17 and Th1 cells are elevated in psoriasis, with greater elevations observed in Th17 cells; 2) cytokine production by these cells can be blocked by inhibiting either NF- κ B or STAT3; and 3) CCR6, IL-17A, and TNF- α represent the best blood markers for disease activity in psoriatics.

Abstract No: 20

Title: Synovial tissue and psoriatic lesional skin show marked interleukin-20 expression in patients with psoriatic arthritis.

Authors: Christina Jonckheere¹, Arno Van Kuijk¹, Cristina Lebre¹, Maartje Boumans¹, Danielle Gerlag¹, Paul-Peter Tak¹

Affiliations: ¹ AMC, Netherlands

Text:

Aims: Interleukin-20 (IL-20) appears to act as a pro-inflammatory cytokine in psoriasis, but its role in psoriatic arthritis (PsA) is unclear. The objective of this study was to investigate the expression of IL-20 in psoriatic skin lesions and inflamed synovium in patients with both psoriasis and PsA and its response to treatment with alefacept.

Methods: Before and after treatment with alefacept, paired skin and arthroscopic synovial biopsy specimens were obtained from patients with plaque psoriasis and PsA ($n=11$). Synovial biopsies were also obtained from patients with rheumatoid arthritis (RA) ($n=10$) as disease controls. Immunohistochemical analysis was performed using a monoclonal antibody specific for IL-20. Double labeling experiments were performed to determine the phenotype of IL-20 positive cells in the synovium.

Results: The skin biopsy specimens showed a marked expression of IL-20, which decreased after treatment with alefacept. The mean semiquantitative

score for IL-20 expression in the skin decreased from 3.0 to 1.0 ($P=0.041$) after alefacept treatment ($n=6$). IL-20 was also expressed in the synovium of both PsA and RA patients in the intimal lining layer, in the sublining and in endothelium. Double labeling showed that IL-20 was present on CD55+ fibroblast-like synoviocytes and CD68+ macrophages. There was no statistically significant decrease in IL-20 expression in synovium after alefacept treatment

Conclusion: IL-20 is expressed in psoriatic skin lesions in patients, showing a clear response to therapy with alefacept. It is also expressed in the inflamed synovium in patients with PsA, suggesting a role in the pathogenesis of both skin and joint manifestations.

Abstract No: 21

Title: Neuronal changes in psoriasis exacerbation

Authors: Husameldin El-Nour¹, Alexander Santos¹, Malin Nordin¹, Pontus Jonsson¹, Margreta Svensson², Klas Nordlind¹, Mats Berg³

Affiliations: ¹ Karolinska Institutet, ² Private practitioner, ³ Uppsala Academic Hospital, Sweden

Text:

Aim: The aim of this investigation was to study the neuronal contribution to psoriasis at the remission and exacerbation phases.

Methods: We examined the expression of the neuronal markers protein gene product 9.5 (PGP 9.5), growth-associated protein-43 (GAP-43) and substance P, in addition to its receptor (R), neurokinin-1R (NK-1R) in psoriatic skin from seven female patients at remission and exacerbation, using immunohistochemistry.

Results: The number of epidermal PGP 9.5 immunoreactive nerve fibres in the involved skin during exacerbation was decreased ($P<0.01$) compared to involved skin at remission and noninvolved skin at the exacerbation phase. GAP-43 positive nerve fibres were decreased ($P<0.05$) in the involved skin in contrast to noninvolved skin, during exacerbation. Substance P expression was seen on both immunoreactive nerve fibres and cells with a down-regulation ($P<0.01$) in the number of positive nerve fibres in the involved skin compared to noninvolved skin, at the exacerbation phase. The number of substance P positive cells was slightly lower in the involved skin at exacerbation than at remission. The number of NK-1R immunoreactive cells was increased ($P<0.01$) in the involved skin in contrast to noninvolved skin, at the exacerbation phase.

Conclusions: Our findings suggest a crosstalk between the nervous system and inflammation during psoriasis exacerbation in the form of an altered expression of nerve fibres, substance P and its NK-1R.

Abstract No: 22

Title: The impact of tonsillectomy on patients with chronic psoriasis

Authors: Helgi Valdimarsson¹, Ragna Thorleifsdottir², Sigrun Sigurdardottir², Jon Olafsson³, Bardur Sigurgeirsson³, Hannes Petersen⁴, Andrew Johnston⁵

Affiliations: ¹ Landspítali University Hospital, ² PhD student, ³ Dermatologist, ⁴ ENT surgeon, Iceland ⁵ Assistant Professor, Department of Dermatology, Univ. of Mich., United States

Text:

Objective: We have proposed that cross-reactive CD8+ T cells, which recognize streptococcal M-protein (M) determinants in the tonsils and keratin (K) determinants presented by HLA class I molecules in the epidermis, play an important pathogenic role in psoriasis, and we have reported marked increase of such cells, in the blood of psoriasis patients. We are now studying whether tonsillectomy is associated with clinical improvement and reduction in the frequency of these cells.

Methods: Prospective study, 15 patients tonsillectomized (TX) and 15

matched controls. Disease activity monitored for 2 years, and the frequency of T cells that respond by IFN- γ and/or IL-17 production to different combinations of short M and K peptides that share 4-5 residues. CLA+ CD4+ and CD8+ T cells analyzed by FACS.

Results: Average PASI reduction of 40% observed in the TX patients 2, 6 and 12 months after TX, no significant changes in the controls. The improvement in the TX-patients associated with marked decline in the frequency of cross-reactive IFN- γ or IL-17-producing CLA+CD8+ T cells, no consistent changes in the controls. The changes have persisted in the 8 TX patients followed for 12 months. No consistent changes in the frequency of CLA+CD4+ T cells.

Conclusion: The findings indicate that determinants common to streptococcal M-proteins and keratins are auto-antigen(s) in psoriasis, and that effector CD8+ T cells from the tonsils may play a significant role in the pathogenesis of psoriasis.

Epidemiology

Abstract No: 23

Title: Body weight and smoking associates with onset of plaque psoriasis: a population based case-control study.

Authors: Katarina Wolk¹, Lotus Mallbris¹, Per Larsson¹, Andreas Rosenblad², Eva Vingård², Mona Ståhle¹

Affiliations: ¹ Karolinska Institutet, ² Uppsala University, Sweden

Text:

Accumulating evidence indicates that body weight, alcohol and smoking are associated with psoriasis. However, these factors have scarcely been investigated in relation to onset and disease activity at onset of psoriasis. A population-based case-control study was performed including 373 cases with onset of first time plaque psoriasis within 12 months and matched healthy controls. Psoriasis activity was measured by Psoriasis Area and Severity Index (PASI).

Analyses were performed using conditional logistic regression. For each unit increment in body mass index (BMI), there was statistically significant 9 % increased risk for psoriasis onset and 7 % higher risk for increased PASI.

Smoking was associated with 70 % increased risk for onset but was not related to PASI. No associations were observed for alcohol, weight gain and use of smokeless tobacco.

Excessive body weight and smoking are risk factors for onset and higher BMI increases the PASI of plaque psoriasis at onset.

Abstract No: 24

Title: Prevalence of articular involvement in patients with psoriasis

Authors: Rieke Driessen¹, Delia Diaconu¹, Rieke Driessen¹, Peter Van De Kerkhof¹, Piet Van Riel¹, Jaap Franssen¹, Elke De Jong¹

Affiliations: ¹ Radboud University Medical Centre, Netherlands

Text:

Background: Psoriatic arthritis is a rheumatoid-like joint disease associated with psoriasis of nearby skin and nails, characterized by peripheral joint inflammation with an asymmetric pattern of involvement.

Aim: To investigate the prevalence of self-reported joint complaints in patients with psoriasis in the Netherlands.

Methods: A total of 6000 questionnaires was sent to members of the Dutch Psoriasis Society. The forms contained questions about skin disease and

joint complaints according to ACR and AMOR criteria. Severity of the psoriasis was assessed by the Self-Administered Psoriasis Area and Severity Index (SAPASI).

Results: Of the 6000 questionnaire forms, 1562 (26%) were returned. The group of responders comprised 51% males and 49% females. Mean age was 55 years (SD14.0, range 18-103). Mean duration of psoriasis was 27 years (SD 15.8). Median SAPASI score was 4.8 (IQR 2.7-7.1). Of all patients, 17% was treated by a rheumatologist and 69% by a dermatologist. Mean age at first joint complaints was 40 years (range 9-87). The prevalence of joint complaints was 67%, including 98 (6%), 310 (20%) and 629 (41%) with mono-, oligo-, and polyarticular complaints respectively. Of all patients, 21% reported positive on at least 4 ACR criteria (without rheumatoid factor and X-ray). Twenty percent of patients had an AMOR score of at least 6, indicating a risk for spondylitis.

Conclusions: The prevalence of self-reported joint complaints in patients with psoriasis is high, i.e. 67%. Polyarticular involvement is the most prevalent complaint in these patients. Furthermore, an increased risk of arthritis and spondylitis has been identified.

Abstract No: 25

Title: What information do patients with Psoriatic Arthritis seek about their condition?

Authors: Nicola Waldron¹, Charlotte Cavill¹, Neil Mchugh¹, Eleanor Korendowych¹

Affiliations: ¹ RNHRD, United Kingdom

Text:

Aims: To explore what information people diagnosed with Psoriatic Arthritis seek and what types of resources they utilise.

Methods: Information was obtained from patients attending a Psoriatic Arthritis specialist clinic in Bath, UK via a postal questionnaire (47 responses), patient focus group (5 participants) and healthcare professional focus group (6 participants).

Results: 81% of patients sought information outside their clinical appointments. 50% of patients used multiple resources to find their information. 21% could not find the information they required despite using multiple resources. 58% sought information at the point of diagnosis, 37% when starting a new medication, 26% during a flare and 24% routinely between clinic appointments. 79% cited ease of access as the main criterion for utilising a particular resource. The other reasons were ease of understanding (42%) and having used the resource before (32%). Patients mainly used leaflets (63%) and the internet (74%) to research their condition. Only 50% of patients knew of three or more resources that were available for them locally such as physiotherapy, podiatry and emergency injection clinics.

Conclusions: Many patients utilise several resources to find information about their condition. Patients ranked ease of access most highly when choosing a resource. It would be advantageous to have a local bias to the resource to increase awareness of local facilities for patients. This information has led to the successful development of a website with a local bias and links to the main psoriasis and Psoriatic Arthritis associations.

Abstract No: 26

Title: Increased Risk of Psychiatric Disorders in a Pediatric Population With Psoriasis

Authors: Alexa B Kimball¹, Annie Guérin², Andrew P Yu², Eric Q Wu², Shiraz R Gupta³, Yanjun Bao³, Parvez M Mulani³

Affiliations: ¹ Harvard Medical School, ² Analysis Group, Inc., ³ Abbott Laboratories, United States

Text:

Aim: To compare the incidence of psychiatric disorders for pediatric patients with vs. without psoriasis.

Methods: Psoriasis patients aged <18 years with continuous health plan enrollment 6 months before and after the first psoriasis diagnosis date (index date) were selected from the Thompson MarketScan database (2000–2006). Psoriasis patients were matched 1:5 on age and sex to psoriasis-free controls who were attributed the same index date. Patients were followed from index date to the first diagnosis of a psychiatric disorder (ie, alcohol or drug abuse, depression, anxiety disorder, bipolar disorder, suicidal ideation, eating disorder), end of data availability, or disenrollment, whichever occurred first. Patients with psychiatric diagnoses or any psychotropic medication use before the index date were excluded. Cox proportional-hazard models controlling for age, sex, and comorbidities were used to estimate the effect of psoriasis on the risks of developing psychiatric disorders.

Results: The study included 2,144 psoriasis patients and 10,720 matched controls. Mean (±SD) patient age was 11.4 (±4.1) years. A significantly greater percentage of psoriasis patients had a psychiatric disorder compared with controls (5.13% vs. 4.07%; $p=0.0001$), especially depression (3.01% vs. 2.42%; $p=0.0036$) and anxiety (1.81% vs. 1.35%; $p=0.0048$). The risk for developing a psychiatric disorder was significantly greater for patients with psoriasis than for controls, with a hazard ratio estimated at 1.25 (95% confidence interval=[1.11–1.40]). Estimated hazard ratios were 1.23 (1.06–1.43) for depression and 1.32 (1.09–1.61) for anxiety.

Conclusions: Pediatric psoriasis patients were at increased risk of psychiatric disorders, including depression and anxiety, compared with psoriasis-free patients.

Abstract No: 27

Title: The characteristics of a psoriatic arthritis (PsA) cohort in Newfoundland, Canada with an early diseases subset.

Authors: Majed Khraishi¹, Sarah Maclaughlin¹, Gerry Mugford¹, Karen White²

Affiliations: ¹ Memorial University of Newfoundland, ² Nexus Clinical Research, Canada

Text:

Objectives: To examine the clinical characteristics of a cohort of patients with PsA with a subset of early disease

Methods: The charts of patients who met the CASPAR criteria for the diagnosis of PsA seen in a twelve months period in a rheumatology clinic specializing in PsA were reviewed. A subset of these patients were part of a prospective early PsA cohort who had onset of arthritis symptoms less than two years and skin disease duration of less than 10 years. The epidemiologic, clinical and laboratory parameters were recorded. Observational analysis of the data was conducted

Results: 205 patients with PsA meeting the CASPAR criteria were identified including 27 patients with early disease. Analysis was completed on 73 patients (established disease) and on 24 patients with early PsA (a total of 97). All patients had history of skin psoriasis. The mean follow up duration was 44 months (11-153). PsA, PSO age of onset in established and early patients respectively was 44.3, 33.8 and 45.5, 38.3 years. 49 and 60% had family history of psoriasis. 35% had moderate or severe psoriasis and nail involvement in 55%, 54%. polyarticular disease in 36 and 44%, Negative RF was 92 and 94%, ESR 26 and 18mm/hour.

Abstract No: 28

Title: Mortality in Psoriatic Arthritis - A UK Perspective

Authors: Caitriona Buckley¹, Charlotte Cavill¹, Gordon Taylor², Hazel Kay², Nicola Waldron¹, Eleanor Korendowych¹, Neil Mchugh¹

Affiliations: ¹⁾ RNHRD, ²⁾ University of Bath, United Kingdom

Text:

Background: Psoriatic arthritis is known to be associated with increased mortality. To date, mortality studies in Psoriatic Arthritis (PsA) have produced conflicting results. The aim of this study was to determine if the mortality in our cohort of PsA patients is significantly different from the general UK population.

Methods: Patients who were entered onto the PsA database at the Royal National Hospital for Rheumatic Diseases, Bath between 1985 and 2007 were included in this study. Information on patient's deaths was collected retrospectively. The NHS Tracing Service was used to establish which patients were alive and those who had died. Date and cause of death were confirmed by obtaining Death Certificates from the Registry of Births, Marriages and Deaths. A Standardized Mortality Ratio (SMR) was calculated by matching our patient data to single year, 5 year age banded England and Wales data from the Office of National Statistics.

Results: In this cohort of 453 patients (232 men, 221 women), there were 37 deaths. 16 men and 21 women died. The SMR for the male patients was 67.87 (95% CI 38.79 - 110.22), and was 97.01 (95% CI 60.05 - 148.29) for the female patients. The overall SMR for the PsA cohort was 81.82 (95% CI 57.61 - 112.78). The leading causes of death were cardiovascular disease, respiratory disease and malignancy.

Conclusions: These results suggest that mortality in this PsA cohort is not significantly different from the general UK population. In fact, there was a trend towards increased survival, particularly in men.

Abstract No: 29

Title: Psoriasis treatment patterns of dermatologists in Northeast Ohio.

Authors: I Grozdev¹, L Cao¹, K Kavlick¹, RT Brodell¹, EN Mostow¹, NJJ Korman¹

Affiliations: ¹⁾ Murdough Family Center for Psoriasis, United States

Text:

Aims: To describe psoriasis treatment patterns in community dermatologists in Northeastern Ohio.

Materials and Methods: A prospective cross-sectional survey was performed amongst dermatologists in Northeast Ohio. A questionnaire was sent to all dermatological practices in the region. The following factors were used to describe dermatological practices: number of dermatologists in practice; annual number of patients with all diagnoses and with psoriasis seen annually; those who have treated patients within the previous one year with phototherapy, excimer laser, methotrexate, acitretin, cyclosporine, or biologics (alefacept, efalizumab, etanercept, infliximab, adalimumab).

Results: 145 questionnaires were sent to all dermatological practices in Northeast Ohio. 46 questionnaires were completed and analyzed. Annual mean number of psoriasis patients seen in the dermatological practices was 250, representing approximately 4% of the total patients seen. Phototherapy (UV-B or PUVA) was used by 56% of the dermatological practices for the treatment of psoriasis, excimer laser by 29%, methotrexate by 73%, acitretin by 69%, cyclosporine by 38%, biologic agents by 67%, with the majority of dermatologists who utilize biologics using etanercept (65%).

Conclusion: Psoriasis is a relatively common disease seen by dermatologists in Northeast Ohio representing approximately 4% of all patients. The most common systemic treatments for psoriasis amongst dermatologists in Northeast Ohio were methotrexate (73%), followed by acitretin (69%) and etanercept (67%). These findings demonstrate that there is a relatively high usage of biologic agents for the treatment of patients with psoriasis and that phototherapy is less commonly used than all of the other treatments with the exception of cyclosporine.

Abstract No: 30

Title: Psoriasis patient care at two German university hospitals - results of an epidemiological review

Authors: Stefanie Heimann¹, Inka Hillerns², Andreas Colsman³, Michael Sticherling³

Affiliations: ¹⁾ University Hospitals of Erlangen, ²⁾ Univ. Hautklinik Leipzig, ³⁾ Department of Dermatology Erlangen, Germany

Text:

Novel therapeutic agents and data on comorbidities of psoriasis have changed our attitude towards the disease dramatically. At the same time, the level of medical care remains to be improved. In this regard, epidemiological and clinical parameters, comorbidities, co-medication as well as prior therapy were evaluated at two German university hospitals (Erlangen and Leipzig). 757 (Erlangen) and 724 (Leipzig) patients were included in a period of two years. The mean age at time of diagnosis was 29 years, at the time of first presentation to the university hospitals 44 years. Mean PASI at first presentation was 11 at both sites (range 1-47). Psoriasis arthritis was present in 8 % of patients, other comorbidities in 60 % of patients with arterial hypertension (28%), diabetes mellitus (12%) and lipid disorders (7%) prevailing. Any of the four currently licensed biologics were administered in 15 % of patients, but 43 % of the patients had received classical systemic treatment before or were currently treated. The comparatively low rate of psoriasis arthritis may reflect the activities of major local rheumatological departments at both sites. A considerable time lag between first diagnosis and referral to specialised institutions could be demonstrated. Despite a mean PASI indicating medium to severe psoriasis, only less than half of patients had received systemic treatment. The follow-up of patients during the next years will have to show if a shift of disease severity as well as treatment modalities takes place following our current change of perspective.

Abstract No: 31

Title: Psoriatic arthritis prevalence in Mexican patients with psoriasis attending a third level dermatological institute.

Authors: Jose Fernando Barba-Gomez¹, Elizabeth Guevara-Gutierrez¹, Miroslava Zolano-Orozco¹, Gabriela Briseño-Rodriguez¹, Guadalupe Villanueva-Quintero¹, Alberto Tlacuilo-Parra², Sergio Gutierrez-Ureña¹

Affiliations: ¹⁾ Instituto Dermatologico de Jalisco, ²⁾ UMAE Hospital de Pediatría IMSS, Mexico

Text:

Aims: To determine the prevalence of psoriatic arthritis in a mestizo-Mexican population.

Material And Methods: In a cross-sectional study, during January to June 2008, we included all patients with a clinical and histopathology diagnosis of psoriasis. The study was divided in 3 phases, a) diagnosis and type of psoriasis, PASI determination and joint symptoms, b) laboratory analysis, including RF, ESR, CRP, and radiographs of hands, feet and pelvis, c) confirmation and classification of PsA diagnosis by rheumatologists; the diagnosis was established on the CASPAR criteria.

Results: We included 90 patients with psoriasis, 46 (53%) had a PsA diagnosis, female in 60% and a mean age of 50.43 + 15.46 years. The variants were 50% axial, 40% oligo-monoarticular, 8% polyarticular and 2% mutilant. The type of psoriasis was plaques 83%, palmo-plantar 13%, erythroderma 4%. The mean PASI score was 12.02 + 11.13. The articular manifestations included arthralgias 79%, enthesitis 39.5%, arthritis 37.5%, low back pain 35%, cervical neck pain 33%, dactylitis 23% and tendonitis 2%. The laboratory data displayed RF negative in 100%, ESR elevated 40%, and CRP positive 44%. The radiological evaluation showed yuxtaarticular new bone formation in 93%, sacroiliitis in 68%, bone erosions and reduced articular

space in 45%, osteopenia in 25%, anquilosis in 14% and tip pencil deformation in 6%.

Conclusion: In all patients with a diagnosis of psoriasis we must search for articular involvement, because in many occasions neither the clinician nor the patients suspect such affection. This is the first study involving a mestizo-Mexican population.

Abstract No: 32

Title: Analysis of Factors associated with Obesity in Psoriatic Arthritis

Authors: Allen Anandarajah¹, Christopher Ritchlin¹

Affiliations: ¹ University of Rochester Medical Center, United States

Text:

Aims: To examine the relationship between environmental factors and obesity in psoriatic arthritis (PsA) and rheumatoid arthritis (RA) and to determine factors associated with the outcome variable body mass index (BMI).

Methods: Patients were selected from the Consortium Of Rheumatology Researchers Of North America (CORRONA) database and matched for age, sex and disease duration. Univariate analysis was performed to determine if the matched PsA and RA cohorts differ in their association with several variables. These same covariates were examined in matched PsA and RA patients stratified by the categorical outcome variable BMI (30) and logistic regression was then performed in the two cohorts using the same covariates.

Results: Frequency matching (age, sex and disease duration) yielded 2389 RA and PsA pairs. Logistic regression revealed that the number of tender joints, non-smoking status, absence of exercise, depression, age, shorter disease duration and female gender were associated with an elevated BMI in PsA whereas only lack of exercise, non-smoking status and shorter disease duration were associated with obesity in the RA cohort. Stepwise logistic modeling revealed that after controlling for exercise, older age, shorter disease duration, depression and the presence of PsA were associated with an elevated BMI. Increased tender joint counts and female gender also increased the likelihood of obesity in the PsA but not the RA cohort.

Conclusion: These findings support a multiplicative model of obesity in PsA that results from interplay between the environment and factors related to the disease process that remain to be identified.

Comorbidities

Abstract No: 33

Title: Comorbidities in Psoriasis

Authors: Nora Kogan¹, Rosana Veira¹, Elena Chaparro¹, Alejandra Crespo¹, Simon Gusic¹, Mercedes Hassan¹

Affiliations: ¹ Argentina

Text:

Introduction: comorbidities might modify psoriasis. Objective: To assess whether psoriasis comorbidities modify the disease.

Material and Methods: 170 patients with psoriasis (1998-2008). We considered: hypertension, metabolic syndrome, diabetes, dyslipidemia, overweight, cardiovascular disease, liver, thyroid. Evaluated: age, sex, time disease, clinical type, severity, location, family background, DLQI. Group were compared statistically with and without comorbidities and without comorbidities vs 1, 2 and 3 or more.

Results: 62/170 (36%) no comorbidities vs 108/170 (64%) positive. When

compared with vs without comorbidities, no statistic significant differences for male (52% vs 56%), clinical (vulgar 75% vs 74% , erythrodermic 3% vs 10%, pustular 2% vs 6%, arthropatic 19% vs 19%), severity (mild: 10% vs 12%, moderate: 40% vs 42%, severe: 50% vs 46%), location (scalp 68% vs 63%, nails: 32% vs 46%), family history (29% vs 24%), DLQI (21.9 + -1.9 vs 19.7 + -1.7). There were only differences for age (38 + -5.4 vs 55.7 + -8.5), time disease (10.97 vs 13.71 + -6.8 + -2.8) and guttate 21% vs 8%. When comparing the group without comorbidities vs 1, 2 and 3 or more the only differences were for the age and evolution time (with 3 or more: age: 64.4 + -5.9, while evolution: 16.51 + -1.5).

Conclusions: The presence and the increased number of comorbidities was associated with older age, longer time of evolution of psoriasis and to less presence of guttate psoriasis.

Abstract No: 34

Title: Prevalence of psychiatric disorders in psoriatic patients: A survey study.

Authors: Ramin Taheri¹, Behnaz Behnam¹

Affiliations: ¹ Iran

Text:

Introduction: Psoriasis is a common, genetically determined, inflammatory, and proliferative disease. Psychogenic factors exacerbate psoriasis. In this research, we investigate the prevalence of psychiatric disorders in psoriatic patients.

Methods: In the first half of 2007, the psoriatic patients referred to our clinics were enrolled in study by two questionnaires: 1) S.C.L. 90 and 2) personal background information including age, sex, severity and duration of psoriasis, and the lack of the history of the psychiatric disorders in family.

Results: In this study, the most prevalence (31.4%) was due to depression, and O.C.D. Anxiety, interpersonality sensitivity, hypochondriasis, aggression, paranoia, phobia and psychosis were in the next scales. Only the depression cases (8.6%) needed treatment and the same group comprised the major psychiatric disorder in need of consultation. The prevalence of depression increased with increasing age. In addition, an increase in the duration of psoriasis caused a rise in both depression and its treatment rate and paranoia and phobia. By increasing the severity of psoriasis, the patients suffering from depression were in immediate need of consultation and treatment. We also studied the prevalence of O.C.D, anxiety, interpersonality sensitivity, hypochondriasis, and psychosis.

Conclusions: The most prevalence was depression. The prevalence of psychiatric disorders rose with aggravation of psoriasis. Due to the negative impact of depression on the co-operation of the patient with the doctor during the treatment of the skin disease, it was necessary for these patients to first be referred to psychiatric clinics, before their skin disease treatment commenced. Key words: Psychiatric disorders, psoriasis.

Abstract No: 35

Title: Psoriasis and comorbidities during a two years evaluation

Authors: Caius Solovan¹, Esther Baiduc¹

Affiliations: ¹ University of Medicine and Pharmacy, Romania

Text:

Aim: The study would evaluate psoriasis patients in respect to their comorbidities and be a platform for developing the Psoriasis Patient Management Registry (Pso.Reg.ro).

Methods: We evaluated psoriasis patients and their comorbidities (hypertension, diabetes mellitus, ischemic cardiac disease/cardiovascular disease and obesity) in a 24month retrospective clinical study.

Results: There were 219 patients, 53%male and 47%female with ages

between 11-88 years of old. Hypertension was evidenced in 26.02% of patients with psoriasis, diabetes mellitus was present in 14.6% (7.7% of the patients were obese); 14.15% of the psoriasis patients had ischemic cardiopathy. The major association was with obesity (20.76%) compared to general population (3.6%) and major prognostic involvement was with the abdominal type of obesity. In general these co-morbidities were two fold higher in psoriasis patients. Psoriasis arthritis was evidenced only in 18% of patients. Smoking was reported at the same value as in the normal population (34.7%psoriasis/30%normal population); CVD among psoriasis patients was not determined only by smoking habit but other factors too. Our patient's population did not have a higher association with malignancies.

Conclusion: In order to have better evaluation of this data we developed a Psoriasis Patient Management Registry. It would permit to obtain new data for other association (Crohn's disease, anxiety/depression or genito-urinary diseases) too and a better therapeutic approach for the patients (preventing cardiac events through biologicals).

Abstract No: 36

Title: Cardiovascular comorbidity in patients with psoriasis

Authors: Javorka Delic¹, Javorka Delic¹, Vesna Vlahovic¹, Nada Pantic¹

Affiliations: ¹City Institute for Dermatology, Serbia

Text:

Introduction: Psoriasis is a chronic inflammatory skin disease (1-5% of prevalence range), driven by proinflammatory activities of T-helper type 1 cytokines. Also, inflammatory mechanisms have a central role in the pathogenesis of metabolic syndrome and cardiovascular disease.

Aim: Purpose of this study to evaluate the frequencies of cardiovascular disease and metabolic syndrome at patients with psoriasis.

Method: The authors examined 60 patients, 55 with moderate form and 5 with severe form of psoriasis; 41 female, average age 52 years and 19 male, average age 55 years, with psoriasis for mean 18.2 years (1-40 years). Seven patients in this group have juvenile form of psoriasis. Psoriasis confirmed by clinic and histological examination.

Results: Based on clinical and echosonographical examination of heart and blood vessels we founded: arterial hypertension (HTN) in 32 (55%), dyslipidemia in 22 (47%), BMI >30% in 18 (30%), hyperglycemia in 3 (5%), arrhythmia 11 (17%), arterial hypotension in 7 (14%), varicose veins 14 (23%), lipolymphoedema 10 (16%). Genetic factor for psoriasis had 16 (28%) and for cardiovascular disease 24 (40%) of all patients.

Conclusion: Patients with psoriasis showed statistically significantly rates of HTN, dyslipidemia, obesity, arrhythmia, varicose veins, than the general population. These results are very similar to findings in cardiovascular patients. The increased risk for these comorbidities could be due to the effects of chronic inflammatory changes and the secretion proinflammatory cytokines. Cardiovascular examination and treatment of cardiovascular comorbidity are important component of the treatment patients with psoriasis.

Key words: Psoriasis, cardiovascular comorbidity.

Abstract No: 37

Title: Adalimumab induced psoriasis of the scalp resulting in extensive non-scarring and scarring alopecia

Authors: Laila El Shabrawi-Caelen¹, Michelangelo Laplaca², Colombina Vincenzi², Thomas Haidn¹, Robert Müllegger¹, Antonella Tosti²

Affiliations: ¹Austria ²Italy

Text:

Adalimumab, a recombinant fully humanized anti-tumour-necrosis-factor

antibody (TNF-alpha), has gained wide acceptance in the treatment of inflammatory bowel's disease, rheumatoid and psoriatic arthritis and active ankylosing spondylitis. Although adalimumab is usually well tolerated, there is evidence this drug may induce cutaneous side-effects, such as new onset psoriasis. We herein describe two patients with Crohn's disease who developed extensive psoriasis of the scalp with diffuse alopecia 3 months and 2 weeks after the initiation of adalimumab mono-therapy. In addition there was evidence of psoriatic skin lesions on the trunk in both patients. Biopsies from the scalp revealed the characteristic changes of psoriasis, being associated in one patient with a scarring alopecia. Clinically, the lesions largely resolved after withdrawal of adalimumab therapy in one patient. Complete regrowth of the hairs cannot be expected in the second patient. Psoriasisiform alopecia under adalimumab therapy may be severe and diffuse and most importantly irreversible.

Abstract No: 38

Title: Rheological properties of blood as a marker of inflammation and cardiovascular risk in psoriatic arthritis.

Authors: Tatiana Korotaeva¹, Elena Loginova¹, Diana Novikova¹, Lev Denisov¹, Nadezhda Klimova¹, Elena Alexandrova¹, Evgeniy Nasonov¹

Affiliations: ¹Institute of Rheumatology of RAMS, Russian Federation

Text:

Background: psoriatic arthritis (PsA) patients (pts) have increased cardiovascular mortality due to systemic inflammation. Erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) are biological markers of inflammation. In PsA only 40-60% pts demonstrate an elevation in ESR and CRP. Objective: we investigated relationship between cardiovascular risk (CVR), clinical and laboratory markers of PsA activity and red blood cell aggregation (RBCA).

Methods: In total 130 (79 f) PsA pts, age range 21-60 years, mean PsA duration 9,3 (0,1-42 yrs.), mean DAS 4,01 (1,44-8,46) were studied. We detected high sensitive CRP, ESR and parameters of RBCA [T - time of spontaneous erythrocyte aggregation, I - parameter related to shear strength of the largest aggregates at shear rate 2,5 s⁻¹, hydrodynamic strength of aggregates, and Kt (r.u.) - total velocity of aggregates formation] in all pts. We calculated Absolute Total and Hard Risk of Coronary Heart Disease (CHD) (%), by recommendation of ACC, 1999). Statistical analysis was performed with Spearman correlation (R).

Results: Significant correlations were found between parameters of RBCA [T/Kt] and DAS (R=-0,32/0,32/0,33, p<0,05), CRP (R=-0,37/0,41/0,46, p<0,05), ESR (R=-0,34/0,35/0,42, p<0,05)]. In addition, parameters of RBCA [T/Kt] significant correlated with Total CHD Risk (R=-0,32/0,31, p<0,005) and Hard CHD Risk (R=-0,30/0,30, p<0,005). There were discovered significant correlations between DAS and CRP (R=0,40, p<0,005), but not between Total/Hard CHD Risk and clinical/ laboratory markers of PsA activity [DAS, CRP, ESR]. Conclusion: This study demonstrates that parameters of RBCA may be useful for assessment of PsA activity and CVR.

Abstract No: 39

Title: Comorbidity Prevalence in Psoriasis Patients: A Meta-Analysis

Authors: Parvez Mulani¹, Annie Guérin², Andrew P Yu², Eric Q Wu², Shiraz R Gupta¹, Yanjun Bao¹, Ulrich Mrowietz³

Affiliations: ¹Abbott Laboratories, ² Analysis Group, Inc., United States ³ Campus Kiel, Germany

Text:

Aims: To estimate the prevalence of comorbidities among patients with

psoriasis using random-effects meta-analysis of published studies.

Methods: A systematic literature search in PubMed (through June 2008) was conducted for "psoriasis" and the following key words in titles and abstracts: anxiety; psoriatic arthritis; depression; hypertension; obesity; cardiovascular diseases; diabetes; hyperlipidemia, dyslipidemia, or hyperlipoproteinemia; skin cancer and tumor; inflammatory bowel disease; and lymphoma. Cross references were reviewed to identify additional relevant studies. Studies reporting the prevalence or presenting adequate data to compute the prevalence of comorbidities were analyzed. For each comorbidity, prevalence rates across studies were estimated using a random-effects model, which accounted for inter-study variability including size and type of patient sample. Subgroup analyses for anxiety were conducted by including only studies that used the Hospital Anxiety and Depression Scale (HADS) self-assessment questionnaire for comorbidity assessment.

Results: Seventy-nine studies met the selection criteria and were included in this meta-analysis. Pooled prevalence was estimated at 30.2% (95% confidence interval=21.7–38.8) for anxiety, 24.1% (19.3–29.0) for psoriatic arthritis, 21.7% (15.1–28.3) for depression, and 21.2% (19.2–23.3) for hypertension. Estimated pooled prevalence was 11.9% (7.2–16.8) for obesity; 10.2% (7.7–12.8) for cardiovascular diseases; 8.5% (7.4–9.6) for diabetes; 7.4% (6.5–8.4) for hyperlipidemia, dyslipidemia, or hyperlipoproteinemia; 1.4% (0.8–2.0) for skin cancer and tumor; 0.8% (0.1–1.4) for inflammatory bowel disease; and 0.2% (0.1–0.3) for lymphoma. Using a HADS score of >11, anxiety was estimated at 36.1% (28.4–43.7).

Conclusions: Psoriasis patients experience high prevalence's of major comorbidities, particularly anxiety, psoriatic arthritis, depression, and hypertension.

Abstract No: 40

Title: Co-morbidities in a psoriatic arthritis cohort.

Authors: Majed Khraishi¹, Sarah Maclaughlin¹, Gerry Mugford¹, Karen White²

Affiliations: ¹ Memorial University of Newfoundland, ² Nexus Clinical Research, Canada

Text:

Background: PsA is a serious disease that affects 0.3- 1% of the general population and is associated with increased morbidity and mortality. The co-morbidities in early PsA are still not fully defined. Objectives: To examine the co-morbidities in a cohort of PsA patients with a subset of early disease

Methods: The charts of patients who met the CASPAR criteria for PsA diagnosis were reviewed. The patients were derived from a rheumatology clinic specialized in PsA and psoriasis. Patients from a prospective cohort of early PsA were analyzed for comparison (PsA symptoms less than two years and psoriasis duration of less than 10 years). The epidemiologic, clinical and laboratory variables of the patients were recorded. The co-morbidities [e.g. cardio-vascular (CV), metabolic, neoplastic, gastro-intestinal and respiratory] were recorded. Observational analysis of the data was conducted.

Results: 205 patients with PsA were seen in a 12 months period in the clinic. By the time of this report, analysis was completed on 97 patients (23 patients with early disease). Established PsA patients were followed for a mean of 44 months (11-153). The percentage of disease associations with established vs. early PsA respectively were:

CV: 40, 30; smoking: 31, 32; diabetes: 14, 22; hyperlipidemia: 19, 13.5; obesity: 30, 18.5; depression and anxiety 14, 9; Crohn's disease 7, 9. No solid malignancy or lymphomas were reported.

Conclusions: Patients with PsA have high prevalence of cardiovascular diseases and metabolic abnormalities. Similar trend is seen in patients with early disease with the exception of obesity.

Abstract No: 41

Title: Metabolic syndrome at psoriasis onset and at long-term follow-up of psoriasis: A prospective cohort study.

Authors: Lotus Mallbris¹, Katarina Wolk¹, Petra Kjellman¹, Tobias Nordquist², Mona Ståhle¹

Affiliations: ¹ Karolinska Institutet, ² Uppsala University, Sweden

Text:

Background: Psoriasis is the most common immune-mediated inflammatory disorder, affecting more than 3% of the population in the West. Accumulating evidence indicate that psoriasis is associated with several comorbidities. The more common co-morbidity is psoriatic arthritis. Moreover, an increased cardiovascular morbidity has been shown in patients with severe psoriasis. To date it is generally accepted that psoriasis associates with metabolic syndrome, a cluster of risk factors and a strong predictor for cardiovascular disease. Metabolic syndrome includes obesity, dyslipidemia, hypertension and type-II diabetes. It is yet unclear whether the intensity of inflammation or the disease duration that is more important in enhancing the metabolic disorders in these patients. It is also unclear whether the metabolic syndrome is a risk factor or consequence of psoriasis. Prospective studies addressing this issue are lacking.

Material and Method: First we performed a case control study using the "Stockholm Psoriasis Cohort" consisting of patients consecutively recruited within 12 months of disease onset (Plaque psoriasis=489), matched to healthy controls (n=644) randomly chosen from the Swedish Population Registry. Then we performed a prospective longitudinal study, with 3-5 years follow up time after the psoriasis onset.

Results: Psoriasis patients at disease onset did not have an increased prevalence of obesity, diabetes, and hypertension. In contrast, a higher proportion of psoriatic patients had dyslipidemia. Interestingly, we found that the psoriasis patients, 3-5 years after the disease onset, had significantly increased prevalence of hypertension and diabetes type II.

Conclusion: Data suggesting that psoriasis duration is a risk factor for metabolic syndrome.

Abstract No: 42

Title: Inflammation: A pivotal link between psoriatic arthritis and atherosclerosis.

Authors: Anna Abou-Raya¹, Suzan Abou-Raya¹

Affiliations: ¹ University of Alexandria, Egypt

Text:

Objective: To evaluate the prevalence of subclinical atherosclerosis in PsA patients and to correlate it with inflammatory markers and disease activity.

Methods: The study population consisted of 56 patients, mean age 49.9 years with PsA with no previous history or clinically overt cardiovascular disease and 38 healthy age, sex and traditional cardiovascular risk factors matched controls. Of the 56 patients, 32 were active. The serum levels of high sensitivity C-reactive protein (hsCRP), ESR and fibrinogen, and the proinflammatory cytokines interleukin-6 (IL-6) and tumour necrosis alpha (TNF-alpha). All patients were subjected to Doppler examination of the carotid arteries. Carotid intima media thickness (CIMT) was assessed and the presence of plaques documented.

Results: After adjusting for traditional cardiovascular disease risk factors PsA had a higher prevalence of subclinical atherosclerosis. Seventeen of the 56 patients (30%) demonstrated subclinical atherosclerosis. PsA patients had a significantly higher CIMT than in controls. CIMT correlated significantly with disease duration, disease activity and with the number of tender and swollen joints. The levels of IL-6 and TNF-alpha were significantly higher in the PsA patients compared to the controls. There was a significant positive

correlation between CIMT and the levels of proinflammatory cytokines IL-6 and TNF- α .

Conclusions: PsA patients have an increased prevalence of subclinical atherosclerosis and thus are at an increased risk of cardiovascular morbidity and mortality. Chronic systemic inflammation appears to be the link between PsA and atherosclerosis. It is thus imperative to control inflammation in an attempt to protecting against cardiovascular disease in PsA patients.

Abstract No: 43

Title: Lipid pattern in psoriatic patients in a Brazilian population observed in a university hospital.

Authors: Sueli Carneiro¹, Fabíola Pereira¹, Marcelo Brollo¹, Gustavo Verardino², Mario Chaves³, Alessandra Drummond¹, Marcia Ramos-e-silva¹

Affiliations: ¹Federal University of Rio de Janeiro, ²State University of Rio de Janeiro, ³State University of R, Brazil

Text:

Aims: Determine the lipid profile in psoriatic outpatients at a University Hospital in Rio de Janeiro, Brazil.

Methods: A cross-sectional study was performed in 108 patients from both sex, older than 20 years, with mild to severe psoriasis, and compared to 73 healthy individuals. All individuals had not taken any medication that affects lipid metabolism in the last 6 months. Patients and controls did not differ in sex, age and personal habits and had no associated co-morbidities. Measurement of skin disease severity was performed by Psoriasis Area and Severity Index (PASI) and body mass were evaluated using Body Mass Index (BMI). Blood samples were taken after a 12 hour fasting to measure levels of cholesterol, LDL-c, HDL-C, apolipoprotein A (apoA), apolipoprotein B (ApoB), Lipoprotein a (Lpa) and triglycerides (TG).

Results: Psoriasis patients had significantly increased TG ($p=0.0001$), apo B ($p=0.0001$) and decreased HDL-c ($p=0.0001$) and Lp(a) ($p=0.0001$). The male group presented higher levels of alcohol consumption (38.5%; $p < 0.0001$), HDL-c < 40 mg/dl (68.3%; $p=0.001$), TG > 150 mg/dl (44.4%; $p < 0.0001$), apo B > 100 mg/dl (61.5%; $p = 0.004$) and the female, higher proportion of HDL-c < 50 mg/dl (50 %; $p=0.001$), TG > 150 mg/dL (23.8 %; $p=0.037$) and apo B > 100 mg/dl (62.8%; $p=0.001$). There were no correlation between lipoproteins, life style and PASI. Males had a higher PASI than females.

Conclusion: The lipoprotein pattern found may indicate that psoriasis is associated with an abnormal lipid profile observed in HDL-c, TG and apolipoprotein B levels.

Clinical Research and Therapeutics

Abstract No: 44

Title: Davobet in the topical treatment of psoriasis vulgaris.

Authors: Iryna Voznyak¹, Tatyana Svyatenko²

Affiliations: ¹Danylo Halytsky Lviv National Medical Un, ²Dnipropetrovsk State Medical Academy, Ukraine

Text:

Aim: Psoriasis treatment has been an actual, complex therapeutic problem.

Methods: We paid attention to preparation Daivobet (Taclonex) (50 mcg/g calcipotriol and 0.5 mg/g betametazone dipropionate). It decreases expression of pro-inflammatory cytokines, promotes T-cells regulation, decreases

vascularization, promotes normal differentiation of keratinocytes. Under supervision were 19 outpatients, aged 19-46, with clinical diagnosis of vulgar psoriasis of the trunk and/or extremities and moderate course of dermatosis. They were receiving Daivobet for 18 weeks. Patients, who had been treated with other topical medicines during last month, were not involved in the experiment.

Results: Regression of the disease was estimated according to: decrease of infiltration, erythema, peeling, itching. Control group comprised 15 patients, aged 23-47, with clinical diagnosis of vulgar psoriasis of the trunk and/or extremities and moderate course of dermatosis, who were treated according to traditional methods. All patients of the general group experienced a considerable decrease of itching, erythema, infiltration of the skin in the foci of lesion after 6-7 days of treatment. Infiltration, peeling almost completely regressed after 15-17 days of treatment. One patient had such side effects as heartburn and reddening of the skin in the affected area following 1-1.5 hours after two applications, but there was no need to abolish the medication. In the control group reversible progression of erythema, infiltration in the foci of lesion started after 8-12 days of therapy; infiltration, peeling completely regressed after 17-27 days of treatment.

Conclusions: In our opinion, application of Daivobet is perspective due to its efficiency and safety from medical point of view.

Abstract No: 45 Withdrawn

Abstract No: 46

Title: Comparing attrition for the biologic therapies: Biologic survival

Authors: Ronald Vender¹, Kristen Noiles²

Affiliations: ¹Dermatrics Research, ²McMaster University, Canada

Text:

Aims: Not only have the biologic therapies demonstrated efficacy in multiple long-term trials, but the results of several studies also suggest that superior patient retention may be an additional benefit of these agents. This poster aims to compare attrition for the various biologic therapies, including the anti-tumor necrosis factor alpha (anti-TNF α) agents and ustekinumab.

Methods: An in-depth literature review was conducted using PubMed and MEDLINE. Randomized, controlled trials utilizing biologic agents as monotherapy for the treatment of psoriasis were analyzed for patient numbers over time. Studies which provided data on patient retention for at least 24 weeks were selected, graphed, and compared. For the studies using various dosing regimens, intrastudy attrition rates were also contrasted.

Results: Ten trials were selected, graphed and charted to compare attrition rates. Reasons for discontinuation are listed for each study. Due to differences in sample size, study design, dosing regimens, study duration and limited data with regards to patient numbers, it is difficult to draw definitive conclusions. However, given the data available, etanercept appears to be the most successful therapy in terms of patient retention in studies both greater than and less than 30 weeks.

Conclusions: While the data available thus far on patient retention for the biologic therapies is severely limited, preliminary conclusions can be drawn. Among the biologic agents, etanercept appears to be associated with the lowest rate of discontinuation. This may be due to superior efficacy and to a decreased likelihood of experiencing adverse events.

Abstract No: 47

Title: Disease duration of psoriatic arthritis is an important risk factor for reduced heart rate variability.

Authors: Diana Novikova¹, Tatiana Korotaeva², Elena Loginova², Alexander Novikov³, Elena Alexandrova³, Evelina Mach², Eugeny Nasonov²

Affiliations: ¹⁾ Institute of Rheumatology of RAMS, ²⁾ Rheumatology, ³⁾ Clinical research, Russian Federation

Text:

Background: psoriatic arthritis (PsA) patients (pt) have increased cardiovascular morbidity and mortality. Heart rate variability (HRV) reflects sym-patho-vagal imbalance in the autonomic nervous system. Low HRV indexes are independent risk factor for death and non-fatal cardiovascular events both survivors of a myocardial infarction and in an asymptomatic population.

Objective: the aim of this study is to evaluate HRV in early and longstanding PsA.

Methods: HRV was investigated in 127 PsA pt (81female): 32 pt with early PsA(<24m) and 95 - with PsA>24m with DAS4 3,88 (2,71;5,01) were studied. The control group consisted of 65 age-matched healthy subjects. The following parameters of HRV from 24h ECG ambulatory recording were performed: time-domain parameters, adjusted by MeanNN (SDNNn%, SDNNin%, rMSSDn%, pNN50%). We also assessed the presence of traditional cardiovascular risk factor (systolic blood pressure, smoking, body mass index, dyslipidemia). Inflammatory markers [ESR, high sensitive CRP, fibrinogen], blood viscosity profiles were detected in all pt. Significant lower values of HRV were detected in PsA>24m when compared to the control group. In early PsA HRV parameters were significantly higher when in PsA>24m and comparable with HRV in the control group. There were not differences between traditional cardiovascular risk factor, disease activity, inflammatory markers, severity of rheologic disturbances in early PsA and PsA>24m.

Conclusion: Longstanding PsA associated with reduced HRV suggesting impotent role of chronic inflammation in the pathogenesis of cardiac autonomic dysfunction in PsA pt. However, longer follow-up is needed to assess the correlation between decreasing HRV indexes and increasing cardiovascular risk in PsA pt.

Abstract No: 48

Title: Infliximab in the management of psoriasis of patients previously treated with other biologic agents.

Authors: Theognosia Vergou¹, Aikaterini-Evangelia Moustou¹, Paraskevi Tseke¹, Alexander Stratigos¹, Christina Antoniou¹

Affiliations: ¹⁾ A. Sygros Hospital of Athens, Greece

Text:

Aim: To determine the efficacy of infliximab in psoriatic patients with moderate to severe disease who failed to respond, relapsed or experienced an adverse event with other biologics.

Methods: We report 15 patients with a mean age of 39.6. Seven also suffered from psoriatic arthritis (PsA). Seven have been previously treated with Efalizumab, six with Etanercept and two with both Efalizumab and Etanercept. All subjects have discontinued treatment due to either no response or adverse events to the precedent therapy. We evaluated the PASI score as a response to treatment before every infusion.

Results: At the 4th infusion (week 14) 13 patients (86.6%) achieved PASI50 and 8 patients (53.3%) PASI75. At the 6th infusion 90.9 % (10 from 11) of the patients had a PASI improvement of at least 75%. Evaluating the long term efficacy, 6 patients were on infliximab treatment approximately for two years. Four of them (66.6%) achieved PASI50 and three (50%) PASI75. PsA responded to therapy from the first infusion and relapsed to one patient who developed lupus like syndrome. Two patients discontinued therapy due to induction of lupus like syndrome together with positive ANA (1/160) and change of the type of psoriasis to palmoplantar, respectively. Other adverse events were fatigue after the infusion, urticaria in one case and an event of herpes zoster. Three patients developed ANA during therapy (1/160, 1/320).

Conclusions: In this small cohort of patients with moderate to severe

psoriasis, refractory to other biologics, infliximab is an important and safe therapeutic pathway.

Abstract No: 49

Title: A sensor-based Excimer-Laser therapy for Psoriasis vulgaris

Authors: Peter Weisenseel¹, Sonja Molin², Oleksander Kovnerystyy², Joerg C. Prinz², Florian Klempff³, Peter Kaudewitz²

Affiliations: ¹⁾ Ludwig-Maximilians-University, ²⁾ Department of Dermatology, LMU Munich, ³⁾ Bavarian Laser Centre, Erlangen, Germany

Text:

Rationale: The Excimer-Laser has shown to be an effective tool in the treatment of Psoriasis vulgaris, especially in patients with a relatively small number of sharply demarked and recalcitrant plaques. But the conventional Excimer-Laser systems are time consuming and the handheld application often leads to overlapping or gaps within the treated spots, which accounts to local over- respectively underdosing.

Aim: We sought to develop a half-automatic Excimer-Laser system that should be able to distinguish affected from non-affected skin and to irradiate exclusively the affected skin with a minimum of surveillance by the medical staff.

Methods: In cooperation with the Bavarian Laser Centre, a prototype of a sensor-based Excimer-Laser (308 nm) was developed: A 3D-optical sensor-system collects data from the patient's skin and a specially developed software is able to distinguish affected from unaffected skin. Based on this data, the system makes a treatment proposal. After the validation by the physician, the Excimer-Laser is navigated over the affected patient's skin by a software-controlled steering device. During the irradiation the system is able to readjust the way of the Excimer-Laser-beam if the patient moves a little bit.

Interim results and outlook: The system has only been used in a limited number of patients so far. Certain adjustments regarding the sensor-device and the software still have to be done, but the safety profile is excellent and we are looking forward to work with this unique Excimer-Laser.

Abstract No: 50

Title: Clinical analysis of 225 cases of generalized pustular psoriasis

Authors: Xu Fang¹, Jun Zhou¹, Qiong Huang¹

Affiliations: ¹⁾ Huashan Hospital, Fudan University, China

Text:

Objective: To study the clinical features and therapies of generalized pustular psoriasis (GPP).

Methods: 225 cases of the patients with GPP in Huashan Hospital from 1997 to 2006 were reviewed retrospectively and analysed.

Results: Most cases were acute GPP accounting for 189 or 84%. The attack age was later of those who have a history of psoriasis vulgaris. Infection and irregular corticosteroid therapy were important factors in inducing and aggravating the disease. Nearly 1/3 patients had sore throat besides fever. In terms of complications, cardiovascular diseases and diabetes accounted for over half of all. The top five laboratory findings included increased ESR, leukocyte and neutrophil, hypoproteinemia and anaemia. The regression time of pustular was 7.65 days in the combined treatment of Retinoic acid and glycyrrhizic acid. According to multiplicity analysis, the rate of relapse in the patients who were previously treated with systemic corticosteroids was as 5.7 times high as that in the non- corticosteroids-used patients.

Conclusions: Heterogeneity and a great effect on organic metabolism were noted in GPP. Retinoic acid combined with glycyrrhizic acid is worth recommending. The rate of relapse increased obviously in corticosteroids-used patients.

Key words: psoriasis, pustular

Abstract No: 51

Title: Efficacy and safety of efalizumab, etanercept and infliximab in psoriasis: Our experience.

Authors: Ahmet Akar¹, Mustafa Tunca², Ercan Caliskan², Erol Koc², Zafer Kurumlu²

Affiliations: ¹ GATA, ² GATA Dermatology, Turkey

Text:

We have compared the efficacy and safety of efalizumab, etanercept and infliximab in the patients that were treated in our clinics for psoriasis. The efficacies of these biologic agents were compared using ratio of PASI score improvements and the ratio of patients reached to PASI-50-75-90 at week 12 and 24, among 47 psoriatic patients who received biologics in our clinics for psoriasis. Among these patients 21 received etanercept, 11 received efalizumab and 15 received infliximab. At week 12, efficacy on PASI scores of efalizumab, etanercept and infliximab were 39%; 49%; 65.1% respectively. There was a statistically significant difference between the efficacies of efalizumab and infliximab. When the efficacies of efalizumab and etanercept, and efficacies of etanercept and infliximab were compared there were not statistically significant differences. At week 24 efficacies of efalizumab, etanercept and infliximab were 64.4%; 78%; 81% respectively, and there was no statistically significant difference. These biologics are easily tolerated by patients, and significant adverse events were not observed. Our results indicate that efalizumab, etanercept and infliximab are efficacious in psoriasis.

Abstract No: 52

Title: Achieving minimal disease activity (MDA) criteria decreases progression of joint damage in PSA.

Authors: Laura Coates¹, Catherine Schentag², Ker-Ai Lee³, Vinod Chandran², Richard Cook³, Dafna Gladman²

Affiliations: ¹ University of Leeds, United Kingdom ² Toronto Western Hospital, ³ University of Waterloo, Canada

Text:

Background: Minimal disease activity (MDA) is defined as "that state of disease activity deemed a useful target of treatment by both the patient and physician, given current treatment possibilities and limitations" and criteria for PsA have recently been developed. The aim was to investigate the prognostic ability of these criteria.

Methods: The study was conducted using a prospective psoriatic arthritis cohort. Patients were classified as MDA if they fulfilled the criteria (5 of 7 from: tender joint count \leq 1; swollen joint count \leq 1; psoriasis activity and severity index \leq 1 or body surface area \leq 3; patient pain visual analogue score(VAS) \leq 15; patient global disease activity VAS \leq 20; health assessment questionnaire \leq 0.5; tender enthesal points \leq 1) for >12 months. Controls were matched for follow up duration. Damage progression was assessed using clinical damaged joint counts. Other factors affecting the damage progression were investigated using regression models.

Results: 116 (37%) patients achieved MDA for >12 months and 200 controls were chosen. Follow up was 34 months. Of the MDA patients, 69% showed no progression of damage, compared to 51% of controls. The mean change in damaged joint counts was 0.931 (range 0-12) in the MDA group and 2.245 (range 0-17) in the controls (p=0.0005). Multivariate analyses revealed that elevated ESR, baseline clinical joint damage and use of biological therapies increased the likelihood of clinical joint damage progression (p<0.05).

Conclusion: Patients achieving MDA have a significant reduction in the progression of the clinical damaged joint count providing evidence that aiming

for low levels of disease activity can improve patients' outcome.

Abstract No: 53

Title: Videodermoscopy and in vivo reflectance confocal microscopy in plaque psoriasis.

Authors: Lidia Rudnicka¹, Olszewska Malgorzata², Kardynal Agnieszka³, Kurzeja Marta³, Warszawik Olga³

Affiliations: ¹ CSK MSWiA, ² Warsaw Medical University, Poland ³ CSK MSWiA,

Text:

Plaque psoriasis is usually easily diagnosed base on clinical appearance. In rare cases the clinical diagnosis may be doubtful. The aim of the study was to evaluate whether videodermoscopy and in vivo reflectance confocal microscopy (RCM) may be employed as diagnostic aid in patients with psoriasis.

Thirty patients with confirmed psoriasis were included into the study and evaluated by either videodermoscopy or RCM or both methods. Videodermoscopy was performed with the use of Fotofinder II Videodermoscope. RCM was performed with the use of Vivascope 1500.

All videodermoscopy images revealed the presence of presence of large, confluent scales on reddish background and in 75% of images regular hairpin - like vascular structures, aligned in a dense and uniform manner, could be observed. These vascular structures were not seen in other inflammatory skin diseases. RCM images demonstrated small dark nuclei in cornocytes (parakeratosis) and presence of polymorphonuclear leukocytes (Munro microabscesses).

Other features of psoriasis that could be visualized using RCM are thinning of granular layer, acanthosis, increased number of papillary rings (papillomatosis) and dilated capillaries within papillary rings. In conclusion, these results show that both, videodermoscopy and in vivo reflectance microscopy images show characteristic features, which may be helpful in differential diagnosis of psoriasis in doubtful cases.

In videodermoscopy these are hairpin - like vascular structures, aligned in a dense and uniform manner within the lesion. Characteristic features of plaque psoriasis seen in RCM are: dark nuclei in cornocytes (parakeratosis), presence of polymorphonuclear leukocytes (Munro microabscesses and dilated capillaries within papillary rings).

Abstract No: 54

Title: Experience of topical therapy in treatment of psoriasis vulgaris.

Authors: Yuriy Andrashko¹, Hennadiy Astsaturov², Oleg Nadashkevich²

Affiliations: ¹ Uzhgorod National University, ² Department of dermatovenereology, Ukraine

Text:

Psycho-social impact of psoriasis and its increasing incidence make these problems ever more urgent. Purpose of investigation was to provide clinico-immunological substantiation of the efficacy of combined topical therapy of psoriasis vulgaris. Under surveillance were 50 patients (18 females, 32 males), aged 18 to 57 years, with mild and moderate psoriasis vulgaris of stable and regressive stages.

By the scheme of therapy were administered: for the first 2 weeks betamethasone valerate 0.1% (in the morning), calcitriol in the evening; for the next 2 weeks on Tuesday, Thursday, and Sunday mornings - betamethasone, on evenings - calcitriol, for the rest days - calcitriol in the morning and evening: the next 4 weeks on Saturday and Sunday mornings - betamethasone, in the evening - calcitriol, for the rest days - calcitriol in the morning and evening.

Before and after therapy clinico-laboratory monitoring included: index PASI and determination of interleukins (IL-8, IL-10, TNF- α) by enzyme immunoas-

say. Pretreatment index PASI ranging 1.8-11.2 (mean value - 7.5) decreased by 53.4% (mean value - 3.2) after the 8-week course of therapy. Immunological data displayed positive dynamics - pretreatment levels as compared to post-therapy were: IL-8 0.13 ± 0.06 pg/mg versus 0.039 ± 0.07 pg/mg, i.e. decreased by 70%, TNF- α 27.7 ± 10.6 pg/mg versus 11.2 ± 7.3 pg/mg - decreased by 66%. At that, IL-10 increased by 57% (from 0.03 ± 0.006 pg/mg to 0.047 ± 0.005 pg/mg).

Conducted investigation has substantiated clinically and immunologically higher efficacy of combined topical therapy versus monotherapy with these preparations.

Abstract No: 55

Title: Efficacy of ustekinumab, a human interleukin-12/23 monoclonal antibody, in psoriatic arthritis patients with baseline C-reactive protein ≤ 0.4 vs < 0.4 mg/dL: results of a post hoc analysis of data from a phase 2, randomized, double-blind, placebo-controlled study

Authors: Alice Gottlieb¹, Alan Menter², Alan Mendelsohn³, Yaung-kaung Shen³, Shu Li³, Arthur Kavanaugh⁴

Affiliations: ¹ Tufts Medical Center, ² Baylor Research Institute, ³ Centocor Research and Development, Inc., ⁴ University of California San Diego, United States

Text:

Aims: To assess ustekinumab efficacy in psoriatic arthritis (PsA) patients with baseline CRP levels ≤ 0.4 vs. < 0.4 mg/dL.

Methods: In this multicenter, double-blind, phase 2 study, patients with active PsA were randomized to UST 90mg or 63mg at wks 0,1,2,3, and PBO at wks 12&16 (n=76, Group 1), or PBO at wks 0,1,2,3, and UST 63mg at wks 12&16 (n=70, Group 2), and were evaluated through wk36. In this post hoc analysis of ustekinumab efficacy in patients with baseline CRP ≤ 0.4 vs. < 0.4 mg/dL, efficacy was assessed by ACR response criteria, PASI; physical function HAQ, and quality of life with the DLQI.

Results: Among patients with baseline CRP ≤ 0.4 mg/dL (n=86), significantly higher proportions of ustekinumab-vs. PBO-treated patients achieved ACR20 (51.3% vs. 14.9%) and ACR70 (15.4% vs. 0.0%) responses, achieved a PASI75 response (58.8% vs. 2.8%), and had significant median reductions (i.e., improvements) from baseline in physical function (HAQ, -0.38 vs. 0.00) and quality of life (DLQI, -7.0 vs. 0.0) scores at wk12. Although ustekinumab was effective among patients with baseline CRP < 0.4 mg/dL (n=60), lower absolute differences and fewer statistically significant differences between the ustekinumab and PBO groups were observed at wk12. Ustekinumab-treated patients with baseline CRP levels ≤ 0.4 mg/dL had significantly greater median percent reductions in CRP levels from baseline to wk12 vs. PBO (37.1% vs. 14.3%), while no treatment difference was observed among patients with baseline CRP < 0.4 mg/dL (0.0% for both).

Conclusion: Patients with higher baseline CRP levels (i.e., ≤ 0.4 mg/dL) appeared to have achieved better joint as well as skin responses than those with lower CRP levels, although patients in both subgroups benefited from ustekinumab treatment.

Abstract No: 56

Title: TNF-alpha blockers in the treatment of early psoriatic arthritis: An observational follow-up study.

Authors: Mariangela Atteno¹, Salvatore D'angelo², Ennio Lubrano³, Giuseppe Provenzano⁴, Ignazio Olivieri⁵, Raffaele Scarpa⁶

Affiliations: ¹ University of Naples Federico II, ² Rheumatology Department of Lucania, ³ Fondazione Maugeri, IRCCS, Telesse (BN), ⁴ Rheumatology Unit, AO Villa Sofia (PA), ⁵ Department of Lucania, ⁶ University Federico II Naples, Italy

Text:

Objective: To assess the efficacy of TNF blockers in a group of early PsA

patients, consecutively enrolled in different centres, showing an unsatisfactory response to previous treatment.

Methods: A 24-week open-label trial was carried out in consecutive early PsA patients classified according to the CASPAR criteria, with unsatisfactory response to previous treatment and with a DAS 28 threshold as > 4 , seen at the outpatient clinics of each centre. Exclusion criteria were previous usage of TNF-blockers and disease duration > 12 months. The choice of any of the three TNF-alpha blockers was carried out by the expert's opinion, without any restriction. Effectiveness was considered as an improvement of DAS 28 at 12 and 24 weeks treatment. Secondary endpoints were an improvement of TJC, SWJ, HAQ score, PASI score. Changes from baseline to the 12 and 24-week follow-up assessments were analysed using the Wilcoxon paired sign rank test. All changes were examined with a LOCF approach when values were missing, with at least one follow-up examination being required.

Results: 19 patients (10M, 9 F, median age 36.7, range 20-60) were evaluated. A statistical improvement of the DAS 28 was observed at 12 and 24 weeks from baseline. Conclusion: This study suggests that the TNF-alpha blockers can be effective in the management of early PsA. TNF-alpha blockers in early PsA dramatically change clinical perspectives of patients, preventing damage and disability.

Abstract No: 57

Title: Effectiveness of etanercept in axial psoriatic arthritis.

Authors: Ennio Lubrano¹, Antonio Spadaro², Antonio Marchesoni³, Raffaele Scarpa⁴, Salvatore D'angelo⁵, Mariagrazia Catanoso⁶, Carlo Salvarani⁶

Affiliations: ¹ Fondazione Maugeri, IRCCS, Telesse (BN), ² University of Rome La Sapienza, ³ Gaetano Pini Hospital Milan, ⁴ University of Naples Federico II, ⁵ Department of Lucania Potenza, ⁶ Arcispedale S.Maria Nuova Reggio Emilia, Italy

Text:

Objectives: To investigate the effectiveness of etanercept in a group of patients with Psoriatic Arthritis (PsA) with axial involvement.

Methods: Multicentre open label observational study in a group of PsA patients, regardless of the disease duration.

PsA was classified on the basis of the CASPAR criteria (1). Inclusion criteria were the presence of clinical (spinal inflammatory pain) by the Calin criteria (2). Effectiveness was defined according to the ASAS responder criteria (BASDAI: 50% relative change or absolute change of 20 mm and expert opinion in favour of continuation), and also as an improvement of 50 % of BASFI, ESR, CRP at 12 months.

Comparisons between baseline and after 12 months treatment were done using Wilcoxon signed rank test for the end-points considered.

Results: The study included 32 patients (25/7 M/F, mean age 48.06 ± 12.1 , disease duration 14.38 ± 7.69 yr). Median treatment duration was 12 months (range 9-29). Effectiveness of etanercept was observed in 72% of patients as BASDAI (Wilcoxon rank test: -4.373, $p < 0.001$), and in 68% for BASFI (Wilcoxon rank test: -4.017, $p < 0.001$), 76% for ESR (Wilcoxon rank test: -4.384, $p < 0.001$) and 68% for CRP (Wilcoxon rank test: -3.058, $p < 0.01$). Conclusion: The present study showed that Etanercept is effective in axial PsA.

References:

1. Taylor W, Gladman D, Helliwell P, Marchesoni A, Mease P, Mielents H. Classification criteria for psoriatic arthritis: development of new criteria from a large international study. *Arthritis Rheum* 2006; 54 (8): 2665-73.
2. Calin A, Porta J, Fries JF, Shurman DJ. Clinical history as a screening test for ankylosing spondylitis. *JAMA* 1977; 237: 2613-4.

Abstract No: 58

Title: Outcome Data on Cohort of PsA Patients on Biologic Therapy.

Authors: Nicola Waldron¹, Charlotte Cavill¹, Neil Mchugh¹, Eleanor Korendowych¹

Affiliations: ¹ RNHRD, United Kingdom

Text:

Aims: To report on the outcome of a cohort of PsA patients on anti-TNF therapy from a designated clinic in Bath, England. Eligibility for one of the three licensed agents requires failure of two or more DMARDs and at least 3 tender and swollen joints.

Methods: Patients on anti-TNF therapy for at least 12 months were included in the analysis. Joint counts, PASI scores, HAQ, DLQI, Patient and Physician Global scores and nail scores were collected every 3 months.

Results: 36 patients were identified. 79% remained on their first agent for at least 12 months, 13% were switched to a second agent and 8% switched to a third agent. All but one patient who switched had previously responded to the first agent for at least 12 months. The reason for switching agents was inefficacy in 62% and adverse events in 38%. Adverse events included abnormal liver function tests and severe rash. All patients who switched to a second agent responded (defined as fulfillment of the PsARC criteria at 3 months) except one who developed a severe rash within 2 months. The patients who switched to a third agent all fulfilled the PsARC criteria at 3 months and have remained on treatment thus far.

Conclusion: The majority of patients respond well to the first anti-TNF agent they try and remain on it for at least 12 months. If patients need to switch agents due to inefficacy or adverse events, the vast majority respond well to their second or third line agent.

Abstract No: 59

Title: Combination of skin and joint outcomes with etanercept in psoriatic arthritis.

Authors: Joerg Prinz¹, Olivier Brocq², Diamant Thaci³, Robert Boggs⁴, Charles Molta⁴, Debbie Robertson⁴, Bruce Freundlich⁴

Affiliations: ¹ University of Munich, Germany ² Princess Grace Hospital of Monaco, Monaco ³ Johann Wolfgang Goethe-University, Germany ⁴ Wyeth, United States

Text:

Aim: Subjects with psoriasis and psoriatic arthritis (PsA) suffer from skin and joint disease manifestations; quality of life (QOL) is also considerably affected. The PRESTA study assessed etanercept in subjects with moderate/severe psoriasis and active PsA. Post hoc analyses assessed % subjects with combined substantial improvement in psoriasis, joint manifestations, and QOL.

Methods: Subjects enrolled in PRESTA were ≥ 18 years old, had failed, not tolerated, or were contraindicated for systemic therapy, had plaque psoriasis; $\geq 10\%$ body surface area (BSA) affected, Physician Global Assessment of psoriasis moderate or worse and PsA with ≥ 2 swollen and ≥ 2 painful joints. The percentage of subjects achieving a triad of PASI 75, ACR 50 or ACR 70, and EQ-5D visual analog scale (VAS) ≥ 82 (UK population norm) was tabulated in 670 subjects for whom both baseline and 24-week data were available.

Results: The mean duration of psoriasis and PsA at baseline was 19 and 7 years, respectively. At baseline mean affected BSA was 30.8%, mean PASI was 19.4, mean EQ-5D VAS was 55.6 and mean tender and swollen joint counts were 19.2 and 12.5, respectively. At week 24, 28.2% of subjects achieved the triad of PASI 75, ACR 50, and EQ-5D VAS ≥ 82 and 21.9% achieved the more stringent triad criteria (PASI 75, ACR 70, and EQ5D VAS ≥ 82).

Conclusions: Etanercept was successful at improving skin and joint mani-

festations and QOL in subjects with moderate/severe psoriasis and PsA. Composite measures may be a valuable and meaningful means of assessing treatment success in patients with both diseases.

Abstract No: 60

Title: Influence of Body Mass Index (BMI) on efficacy of etanercept in psoriasis: The PRESTA study

Authors: Pascal Joly¹, Bruce Kirkham², Debbie Robertson³, Ronald Pederesen³, Charles Molta³, Bruce Freundlich³, Jeffrey Melin³

Affiliations: ¹ Hôpital Charles Nicolle, France ² Guy's & St Thomas' Hospital, United Kingdom ³ Wyeth, United States

Text:

Aim: Assess influence of baseline Body Mass Index (BMI) on efficacy of etanercept in skin disease in moderate/severe psoriasis and psoriatic arthritis.

Methods: The PRESTA study included a 12-week randomised double-blind period, in which subjects (n=752) received either etanercept 50 mg BIW or 50 mg QW, followed by a 12-week open-label period, when all subjects received 50 mg QW. In a post hoc analysis, subjects for whom baseline BMI was available (N=680) were stratified into 3 groups: normal [≤ 24.9 (n=207)]; overweight [25-29.9 (n=288)]; obese [≥ 30 (n=215)]. Efficacy measures included mean and % change from baseline in PASI. Subgroup differences were assessed by ANOVA, adjusting for baseline value, treatment, and BMI group.

Results: At baseline, mean PASI scores ranged from 18.3 to 21.8. At week 24, there were clinically meaningful improvements in PASI among all 3 BMI groups (normal, overweight, and obese). In subjects treated with 50 mg QW etanercept, week 24 mean PASI values (% improvement from baseline) were 3.46 (82%), 4.60 (75%), and 5.00 (75%), for normal, overweight and obese respectively; in subjects treated with 50 mg BIW/QW etanercept, they were 3.18 (84%), 3.43 (81%), and 4.42 (80%), respectively. These differences within treatment arms were statistically significant ($p < 0.05$).

Conclusions: In this study, etanercept was highly effective at improving skin disease in subjects with psoriasis and psoriatic arthritis. Although small differences in PASI among the 3 BMI categories were found, they were not considered to be clinically meaningful.

Abstract No: 61

Title: Efficacy and safety of the new betamethasone valerate 0.1% plaster in mild-to-moderate chronic plaque psoriasis

Authors: Luigi Naldi¹, Lasse Braathen², Andrzej Kaszuba³, Jean-paul Ortonne⁴

Affiliations: ¹ Centro Studi GISED, Italy ² Dermatological University Clinic, Bern, Switzerland ³ Department of Dermatology, MMA, Łódź, Poland ⁴ Dermatologie, Hôp. de l'Archet, Nice, France

Text:

Aims: Betamethasone valerate (BMV) is a potent glucocorticoid now available as a 0.1% medicated plaster. Substantial advantages of this ready-to-use form over standard creams/ointments are a reduced risk of incorrect administration, a uniform BMV distribution targeted only to the affected skin area and an improved patient's acceptability and compliance.

Methods: This was a prospective, multicentre, assessor-blind, randomised controlled study aimed at comparing the efficacy and safety of BMV plaster with those of the BMV 0.1% cream. 231 psoriatic patient aged 49 \pm 14 years, suffering from chronic plaque psoriasis localized at knees and elbows were involved. The two groups were homogeneous as far as initial severity of the signs/symptoms of the disease, extension of the affected skin area, previous treatments received. The treatment lasted three to five weeks, followed

by a 3- month observation period.

Results: The number of patients achieving a complete clearing of the plaques after three weeks of o.d. BMV plaster application (primary efficacy endpoint) was significantly higher, more than twice, than the patients receiving a b.i.d. treatment with the BMV cream (45.7% vs 20.0%, respectively, $p < 0.0001$), according to the PGA score-based judgment of two independent blind assessors. The secondary parameters confirmed the higher efficacy of BMV when administered as medicated plaster compared to BMV cream formulation, in absence of any increase in AEs incidence and severity.

Conclusions: The study confirmed the high therapeutic value of this new ready to use formulation containing BMV, also in a clinical setting very close to the daily clinical practice.

Abstract No: 62

Title: Spondylitis in Patients with Psoriatic Arthritis

Authors: Vinod Chandran¹, David Tolusso², Catherine Schentag³, Richard Cook⁴, Dafna Gladman¹

Affiliations: ¹ University of Toronto, ² University of Waterloo, ³ Toronto Western Hospital, ⁴ University of Waterloo, Canada

Text:

Purpose: To identify risk factors associated with presence of spondylitis in PsA.

Methods: From a large cohort, patients with spondylitis at first clinic visit were identified. The risk factors associated with spondylitis satisfying NY criteria at first clinic visit were identified using logistic regression. We then determined the incidence and risk factors for the development of spondylitis after clinic entry in patients who did not have spondylitis at first clinic visit using multi-state models. Risk factors assessed included sex, age, race, family history of psoriasis/PsA, duration of psoriasis/PsA, number of actively inflamed, swollen, clinically damaged and radiographically damaged joints, dactylitis, nail dystrophy, periostitis, enthesitis, calcaneal spurs, prior NSAID use, DMARD use, smoking, hypertension, ESR and HLA-B*27 status.

Results: 32 patients with spondylitis at first clinic visit were identified. HLA B*27 (OR=5.75), radiographic damage (OR=1.12), and raised ESR (OR=1.02) increased risk of having spondylitis, whereas family history of PsA (RR=0.09) was protective. 206 patients without spondylitis at first clinic visit were included in the follow up study. After 10 years, 15% of patients were observed to develop spondylitis. Nail dystrophy (RR=7.07), number of swollen joints (RR=0.83), number of radiographically damaged joints (RR=1.11), periostitis (RR=5.67) and ESR (RR=1.03) were associated with risk of spondylitis.

Conclusions: 15% of patients with peripheral PsA without axial involvement develop spondylitis over 10 years of follow up in a tertiary care clinic. Spondylitis present at presentation to clinic is different from that which develops on follow up in patients with PsA.

Abstract No: 63

Title: BELIEVE study Results: Adalimumab plus calcipotriol/betamethasone is effective and safe in psoriasis

Authors: Diamant Thaci¹, Jean-Paul Ortonne², Pierre-dominique Ghislain³, Per Sproegel⁴, Kristina Unnebrink⁵, Hartmut Kupper⁵

Affiliations: ¹ Goethe University Frankfurt, Germany ² University of Nice, ³ UCL Saint-Luc, France ⁴ LEO Pharmaceutical Products Ltd. A/S, Denmark ⁵ Abbott GmbH & Co. KG, Germany

Text:

Aims: To evaluate the effect of adalimumab (ADA) plus adjunctive topical (calcipotriol/betamethasone [C/B]) therapy for psoriasis in the Phase IIIb, European study BELIEVE.

Methods: BELIEVE was a 16-week RCT of patients with moderate to severe psoriasis who had failed, been intolerant of, or had contraindications to ≥ 2

systemic therapies. Patients received ADA (80 mg at Week 0; 40 mg eow, Weeks 1–15) and either topical vehicle or topical C/B (daily for 4 weeks, then PRN; face, scalp, and nails excluded). Efficacy assessments were at baseline and Weeks 2, 4, 8, 12, and 16.

Results: 730 patients (366, ADA+C/B; 364, ADA+vehicle) were enrolled. At baseline, patients had a mean PASI of 19.5, DLQI of 14, and a history of prior treatments (cyclosporine, 55%; MTX, 70%; PUVA, 43%; biologics, 48%). At Week 16, mean PASI 75 response rates were 64.8% for ADA+C/B vs. 70.9% for ADA+vehicle ($p=0.086$) and mean improvements in DLQI were 67.2% vs. 71.5% ($p=0.228$). However, initial efficacy was greater with combination vs. monotherapy, with Week-4 PASI 75 response rates of 40.7% (ADA+C/B) vs. 32.4% (ADA+vehicle; $p=0.021$) and mean improvements in DLQI at Week 4 of 60.9% (ADA+C/B) vs. 46.6% (ADA+vehicle; $p=0.001$). PASI and DLQI changes between baseline and Week 16 were correlated (Pearson correlation coefficient $r=0.40$). Incidences of AE were similar between groups and consistent with previous ADA trials.

Conclusions: ADA+C/B was not superior to ADA monotherapy at Week 16; however, patients treated with ADA+C/B combination therapy experienced more rapid initial clinical responses, apparent at Week 4.

Abstract No: 64

Title: Experience with rifampicin in the treatment of psoriasis

Authors: Ivan Grozdev¹, Ivan Grozdev¹, Jana Kazandjieva¹, Nikolai Tsankov¹

Affiliations: ¹ Medical faculty, Sofia, Bulgaria

Text:

Aim: To investigate the efficacy and tolerability of rifampicin in patients with psoriasis.

Materials: We present 53 patients (29 women and 24 men, aged between 16 and 64 years) with eruptive psoriasis. They were divided into two groups according to the evidence of a concomitant streptococcal infection. A placebo group of 10 patients (4 female and 6 male) was also formed. Another group 22 patients (11 women and 11 men, aged between 29 and 69 years) with chronic plaque psoriasis is presented.

Methods: rifampicin was administered orally in a 600 mg daily dosage for at least 60 days. Only emollients were used for topical therapy. The efficacy of treatment was assessed by PASI (Psoriasis Area and Severity Index).

Results: In eruptive psoriasis, there was no statistically significant difference ($p=0.892$) in the clinical improvement in the two groups under active treatment (43.48% and 37.04% of patients from the two groups achieved PASI 70, respectively). rifampicin is therapeutically more efficacious than placebo ($p < 0.005$). Within the group of patients with plaque psoriasis the mean reduction of PASI was 44.50%, while three patients achieved PASI 75. 25 patients continued treatment with rifampicin for 6 months with no exacerbation of the disease.

Conclusion: Rifampicin has a good therapeutic action and safety in psoriasis. It could be an alternative therapeutic option in psoriasis acting as a mild immunosuppressive agent.

Abstract No: 65

Title: Predictors of response to intra-articular steroid injection in psoriatic arthritis.

Authors: Lihi Eder¹, Vinod Chandran¹, Catherine T Schentag¹, Ker-Ai Lee², Richard J. Cook², Dafna D. Gladman¹

Affiliations: ¹ Toronto Western Hospital, ² University of Waterloo, Canada

Text:

Objectives: To assess the effectiveness of intra-articular corticosteroid (IAS) injections in psoriatic arthritis (PsA) and to determine factors that predict clinical response.

Methods: A cohort analysis of PsA patients who were followed prospectively was performed. Only injections performed in the clinic for which there was a post-injection follow-up visit within 6 months were included. Remission was defined as no stress pain or effusion in the injected joint at the first post-injection assessment. Relapse was defined as re-occurrence of joint pain or effusion.

Results: 220 patients with 579 IAS injections were included in the study. The probability of remission at 3 months was 40.8% and increased to 51.5% at 6 months. Of the injected joints that achieved remission, 33% relapsed within 12 months. The median time to relapse was 231 days. On multivariate analysis factors that increased the probability of remission included duration of psoriasis (Odds Ratio (OR) 1.028 for each year with psoriasis) and the use of methotrexate or anti-Tumour Necrosis Factor agents at the time of injection (OR 2.69). Factors that increased risk of relapse included injection into large joints (OR 4.6) and elevated sedimentation rate (OR 15.0), whereas absence of clinical and/or radiographic damage (OR 0.23) and duration of PsA (OR 0.91) reduced risk of relapse.

Conclusions: IAS injections are effective in PsA and result in remission in 40.8% of the patients at 3 months. Factors associated with high inflammatory burden reduce the chance of achieving remission.

Abstract No: 66

Title: Efficacy and safety of ustekinumab in patients with moderate-to-severe psoriasis and concomitant psoriatic arthritis: Result from phase 3 randomized clinical trials.

Authors: Craig Leonardi¹, Kim Papp², Rod Kunyetz³, Philippe Szapary⁴, Shu Li⁴, Newman Yeilding⁴, Kristian Reich⁵

Affiliations: ¹ Central Dermatology, United States ² Probit Medical Research, ³ Ultranova Skincare, Canada ⁴ Centocor Research and Development, Inc., United States ⁵ Dermatologikum Hamburg, Germany

Text:

Aim: To evaluate the efficacy and safety of ustekinumab in a subgroup of patients with psoriatic arthritis in the PHOENIX 1 and 2 clinical trials.

Methods: In the PHOENIX 1 (n=766) and PHOENIX 2 (n=1230) phase 3 double-blind, placebo-controlled trials, patients with moderate-to-severe psoriasis were randomized to subcutaneous ustekinumab (two 45 or 90 mg doses at weeks 0 and 4, followed by 45 or 90mg q12 weeks) or placebo. The common primary endpoint was PASI 75 response at week 12. Herein, we report the efficacy and safety of ustekinumab from an analysis performed on the subset of patients with baseline psoriatic arthritis.

Results: In both trials combined, 28% (564/1996) of patients reported having psoriatic arthritis at baseline. Among those with psoriatic arthritis at baseline, PASI 75 responses were 63%, 61%, 4% for the 45mg, 90mg, and placebo groups, respectively (p<0.001 vs. placebo). This response was maintained at week 28 (61% and 71%, for the 45mg and 90mg groups, respectively). The safety profile of ustekinumab in this subpopulation was comparable to that of the overall psoriasis patient population. In this subpopulation, at week 12, adverse events, serious adverse events, infections, and discontinuations due to adverse events in the combined ustekinumab group vs. placebo were 53.5% vs 52.8%, 1.4% vs. 0.5%, 25.3% vs. 25.6%, and 0.8% vs. 2.1%, respectively.

Conclusion: Ustekinumab provided significant and substantial benefit to patients with moderate-to-severe psoriasis who also had psoriatic arthritis.

Abstract No: 67

Title: The pattern of disability in a real life psoriatic arthritis cohort.

Authors: Maclaughlin Sarah¹, Majed Khraishi², Gerry Mugford², Karen White¹

Affiliations: ¹ Nexus Clinical Research, ² Memorial University of Newfoundland, Canada

Text:

Objectives: To examine changes in disability in patients with PsA with a subset of early disease patients

Methods: A review of patients meeting the CASPAR criteria who were followed in a PsA clinic was conducted. A subset of patients was part of a prospective early PsA cohort (less than 2 year's duration of arthritis and less than 10 years of psoriasis). The epidemiologic, clinical and laboratory parameters were recorded. Their treatment and HAQ score at the beginning and at the last visit were documented. The HAQ was recorded in the early PsA patient's initial presentation. Observational analysis of the data was conducted.

Results: 97 patients with PsA were reviewed: 23 patients (44% males) with early disease and 73 patients with established PsA (59% males). The established and early PsA patients had similar age of onset (44.3&45.5 years). Over 50 % of the established group received biologic DMARD. 75% received methotrexate. The mean HAQ score in the initial assessment was 0.788 (0-2.625) in the established disease as compared to 0.648 (0-1.5) in the early group. After a mean duration of 44 months (11-153) the HAQ in the established group was 0.6365. No significant difference was noted between patients on biologics and on traditional DMARDs.

Conclusion: Our data suggest that significant disability in PsA patients is present at early stages. Established patients' HAQ scores remained stable or improved over the observation period of nearly four years.

Abstract No: 68

Title: CAN-EASE: Canadian assessment of patient outcomes and effectiveness of enbrel in psoriasis.

Authors: Ronald Vender¹, Sheetal Sapra², Martin Gilbert³, Richard Haydey⁴, Robert Termaine⁵, Charles Lynde⁶, Vincent Ho⁷

Affiliations: ¹ Dermatrials Research, ² Institute of Cosmetic and Laser Surgery, ³ Centre Recherche Clinique, ⁴ Winnipeg Clinic, ⁵ MSHJ Research Associates, ⁶ LyndermResearch Inc, ⁷ University of British Columbia, Canada

Text:

Aim: The objective of this ongoing study is to describe patient outcomes in subjects with psoriasis who are prescribed etanercept in a Canadian real-world effectiveness clinical practice setting. The baseline results are reported here.

Methods: In this 12-month, multi-centre open-label single arm study, adult patients with moderate to severe psoriasis receive etanercept 50 mg twice weekly SC for 12 weeks followed by etanercept 50 mg weekly SC for the remainder of the study period. The primary endpoint is the proportion of patients achieving a status of mild or better (≤2) on the Physician Global Assessment (scale 0-5) at month 12. Secondary endpoints include various validated patient outcomes measures.

Results: A total of 231 patients were enrolled at 34 centres across Canada. Most patients (68%) had an inadequate response to or were unable to tolerate systemic therapy or phototherapy. Psoriatic arthritis was present in 43% of patients with a mean duration of 9.4 years. A total of 99% of patients had a PGA of moderate or worse (≥3). The mean baseline DQI was 13.7. A total of 77% of patients had at least one co-morbidity, 37% having 3 or more.

Conclusions: This 12-month, multi-centre open-label single arm is currently ongoing. The baseline results suggest that in a real-world effectiveness clinical practice setting patients who are prescribed etanercept had long standing disease, most patients had an inadequate response to previous treatments and reported dissatisfaction with those therapies. In addition many patients had at least one co-morbidity.

This study was funded by Amgen Canada Inc. and Wyeth Pharmaceuticals.

Abstract No: 69

Title: REPARÉ: Interim analysis of Canadian phase 4 study of etanercept in psoriatic arthritis.

Authors: Dafna Gladman¹, Claire Bombardier², Carter Thorne³, Paul Haraoui⁴, Majed Khraishi⁵, Proton Rahman⁵, William Bensen⁶

Affiliations: ¹ Toronto Western Hospital, ² University Health Network, ³ Southlake Regional Health Centre, ⁴ Institut de Rhumatologie de Montreal, ⁵ St. Clare's Mercy Hospital, ⁶ McMaster University, Canada

Text:

Aim: To describe the long-term efficacy of etanercept in improving functionality and quality of life in Canadian patients with psoriatic arthritis (PsA).

Methods: In this 24-month, open-label, observational trial conducted at 22 Canadian sites, adults with PsA received etanercept 50 mg/ week. Exclusion criteria included active infection, recent malignancy (past 5 years), and previous biologic treatment. The primary endpoint was a ≥ 0.50 unit improvement from baseline on the Health Assessment Questionnaire Disability Index (HAQ DI) at month 24. Secondary endpoints included adverse events and various validated patient outcomes measures. Month-12 interim efficacy data are reported here, calculated using last observation carried forward imputation.

Results: This intent to treat analysis was on 110 adults (mean \pm SD age: 48.4 \pm 10.9 years) with psoriasis and PsA (duration: 16.2 \pm 12.7 and 8.9 \pm 8.4 years respectively). Baseline disease control was fair or worse (≥ 3) for 109 of 110 patients as measured by the Physician Global Assessment (scale 0-5). Baseline HAQ DI mean was 1.50 \pm 0.56. By month-12, 24% of patients discontinued the trial; mostly due to adverse events (10%) or lack of efficacy (8.2%). After 12-months of etanercept, HAQ DI score improved by ≥ 0.50 points in 57% of patients; the mean HAQ DI score was 0.91 \pm 0.67. Mean PASI score improvement was 58% with 42% of patients achieving a PASI-75 and 78% were PsARC responders. Patients also reported fewer days absent from work due to PsA.

Conclusions: Interim efficacy results from this multicentre, open-label, single-arm longitudinal study suggest etanercept offers PsA patients long-term benefits in a real-world setting.

This study was funded by Amgen Canada Inc. and Wyeth Pharmaceuticals

Abstract No: 70

Title: Arterial stiffness in Psoriatic Arthritis (PsA) patients.

Authors: Luisa Costa¹, Lanfranco D'elia¹, Francesco Caso¹, Rosario Peluso¹, Mariangela Atteno¹, Pasquale Strazzullo¹, Raffaele Scarpa¹

Affiliations: ¹ University Federico II, Italy

Text:

Purpose: The aim of this study was the evaluation of arterial stiffness in PsA patients.

Patients and Methods: 11 PsA patients (F/M: 5 /6; mean age 46.4 yrs) with short-lasting disease and 11 healthy control subjects (F/M: 5/6; median age 46.5 yrs) were enrolled. Sample size was calculated in order to have for the analysis a power of 80%. Central haemodynamic parameters and Pulse Wave Velocity that are independent predictors of cardiovascular disease were assessed non-invasively, using tonometry by Sphygmocor system. Patients with history or presence of cardiovascular risk factors (BMI >30 kg/m², smoking, systolic and diastolic hypertension or antihypertensive therapy, diabetes, and hyperlipidemia) were excluded. All patients and controls underwent a complete clinical evaluation.

Results: Data showed a significantly increased value of central pulse pressure (PPc) and carotid-femoral pulse wave velocity (PWV-cf) in PsA patients. In fact, after adjustment for age, height, central mean pressure and heart rate, central PP (PPc) and PWV-cf were significantly higher in PsA patients

in comparison to 1.2 mmHg; $p \pm 1.2$ mmHg vs 35.8 \pm the control group (PPc: 41.6 <0.039 . PWV-cf: 0.35 m/s; $p \pm 0.35$ m/s vs 6.94 $\pm 8.69 < 0.003$).

Conclusion: In our study, PsA patients show an arterial stiffness increase, which is a factor of increased cardiovascular risk. This confirms the idea of psoriatic disease as a systemic condition involving not only skin, joints, and gastrointestinal tract but also endothelial tissue and vessels. The involvement of vascular system gives prominence to pathogenic mechanisms of inflammation which could accelerate the atherosclerotic damage in this condition.

Abstract No: 71

Title: Case documentation of the treatment of psoriasis vulgaris with a fixed combination of calcipotriol and betamethasone dipropionate

Authors: Frank Bachmann¹, Durdana Groß¹, Antje Schumacher¹, Jürgen Schaaß², Sandra Philipp¹

Affiliations: ¹ University Medicine Berlin, Charité, ² Verlagsgesellschaft, GmbH, Germany

Text:

Topical vitamin D3 analogs are the treatment of choice for maintenance therapy in plaque-psoriasis. A fixed combination of calcipotriol and betamethasone (the ointment), however, demonstrates very strong and significant superiority in the first weeks and is recommended for induction therapy. Up to today, there are few documentations of long-term treatment with that ointment.

The objective of this prospective non-investigational study was to assess safety and efficacy of treatment with the ointment for a treatment period of at least six months.

9 patients have been included of which 6 met the criteria for evaluation. The average observation time was 6.5 months. PASI at baseline was 6.2 in average and 2.42 at final visit presenting 61,5% improvement. Summarizing visits 2 to 7, patient's global assessment was 4.4 on a 5-point scale, patients satisfaction 3.4 on a 4-point scale, and practicability 3,6 on a 4-point scale. In average, the patients applied the ointment 6 days a week. 2 patients experienced adverse events (AE). In one, psoriasis significantly worsened, while the other reported worsening of psoriasis as well as pruritus, burning sensation, pain, and change in pigmentation. All AE were mild. In all patients, clinical signs of atrophy were absent. All patients experienced significant improvement of PASI with maximum effect in month 5.6. Due to the dynamic in psoriasis, in 4 patients, psoriasis worsened after initial skin improvement. All of the reported AE were common in patients treated with calcipotriol and betamethasone. And, although topically treated with steroids, clinical signs of atrophy were absent.

Abstract No: 72

Title: Effectiveness of leflunomide in psoriatic joint and skin disease: Results from a non-interventional study of psoriatic arthritis

Authors: Frank Behrens¹, Karel Pavelka², Jiri Stolfa², A. Sipek-Dolnicar³, Harald Burkhardt⁴

Affiliations: ¹ Goethe University, Germany ² Institute of Rheumatology Prague, Czech Republic ³ University Medical Center Ljubljana, Slovenia ⁴ Goethe University, Frankfurt, Germany

Text:

Aims: Psoriatic arthritis (PsA) is a chronic inflammatory joint disease that affects 5% to more than 30% of patients with psoriasis. Leflunomide has demonstrated significant effects on peripheral arthritis but there is a further need to study the effectiveness and tolerance in daily practice under routine care conditions. Objective was the evaluation of the effectiveness and tolerance of leflunomide in the treatment of active PsA in daily clinical practice.

Methods We conducted a prospective 24-week observational study (OSPAL). 514 adult patients in Germany, Czech Republic and Slovenia with active PsA were treated with leflunomide (100 mg/d loading dose for 3 days followed by 20 mg/d). The primary endpoint was the proportion of patients classified as responder by Psoriatic Arthritis Response Criteria (PsARC).

Results Out of 440 patients included in the analysis of PsARC, 380 met PsARC response criteria (86.4%; 95% CI: 82.8 - 89.4). Improvements between pre- and post-treatment examination were also found for pain (82.8% of patients), dactylitis (51.2%), fatigue (66.8%) and skin disease (64.6%). Ninety-eight adverse drug reactions (ADR) occurred in 62 patients (12.1%). The most commonly documented ADRs were diarrhea (16.3% of all ADRs), alopecia (9.2%) and hypertension (8.2%), which are known side-effects of leflunomide. Three serious ADRs (SGPT increased, hypertensive crisis, increased transaminases) occurred in 2 patients (0.4%).

Conclusion In daily clinical practice, leflunomide has been shown as an effective and well tolerated treatment for PsA, with beneficial effects not only on peripheral arthritis but also on pain, dactylitis, fatigue and skin disease.

Abstract No: 73

Title: Efalizumab-induced aseptic meningitis

Authors: Wolfgang Weger¹, Silvia Koller¹, Binder Barbara¹, Wolfgang Salmhofer¹

Affiliations: ¹ Medical University of Graz, Austria

Text:

Aims: New and highly effective options for the treatment of moderate-to-severe psoriasis have emerged with the introduction of TNF- α inhibitors and T-cell modulators, such as efalizumab. With increasing use of these biologics in the treatment of psoriasis unusual and unexpected adverse events have also been observed.

Methods: Efalizumab-therapy was initiated in a healthy 32-year old woman suffering from psoriasis. Within 24 hours after receiving the first injection the patient developed a severe headache and flu-like symptoms not responding to non-steroidal anti-inflammatory drugs.

Results: Physical examination revealed a slight rigidity of the nape of the neck. Laboratory examinations (white blood count, liver and kidney parameters) were within normal range besides an elevated CRP (20.5 mg/l, normal range <8 mg/l). Lumbar puncture showed granulocytic pleocytosis. Neither antibodies against *Borrelia burgdorferi* nor neurotropic viruses were detectable in the cerebrospinal fluid or in blood. Intraparenchymal lesions and cerebral venous thrombosis were ruled out by neuroimaging. Efalizumab therapy was discontinued and treatment with lornoxicam started. The patient recovered nearly completely within a week except a mild headache. Discussion: Drug-induced aseptic meningitis is a rare disease, clinically mimicking infectious meningitis. Although aseptic meningitis has only been rarely reported in patients treated with infliximab, a few cases have also been observed in patients treated with efalizumab. The pathomechanisms by which efalizumab and infliximab might induce aseptic meningitis still remain to be elucidated.

Conclusion: Physicians should consider the possibility of aseptic meningitis in every patient developing neurological signs and symptoms while receiving treatment with TNF-alpha inhibitors or efalizumab.

Abstract No: 74

Title: The increasing efficiency of balneophototherapy with Halobacterium halobium as exogenous photosensibilizer.

Authors: Yuriy Andrashko¹, Alexandr Litus¹, Irina Sharkan¹, Bohdan Lytvynenko²

Affiliations: ¹ Uzhgorod National University, ² Ukrainian Medical and Dental Academy, Ukraine

Text:

For optimization and intensifying of the efficiency of the phototherapy as the method of treatment of psoriasis, the new combinations of the balneo-phototherapy are introduced.

The efficiency of phototherapy with ultraviolet UVB (broad band) was monitored on the 48 patients with moderate and severe plaque psoriasis as a single treatment, in combination with the salt baths and adding of the fixed concentration of the Halobacterium halobium (H.hal.) lysate to the salt baths. H.hal. have the properties of the photosensitizer and also contain antioxidants, the series of vitamins and microelements. The balneologic treatments were carrying out just before the radiation in the course of 15 to 30 min, t°-36-38° C, with the salt concentration 10-20 g/l, and the concentration of H.hal. 200 mg. For the assignment of the optimal dose of UVB-bb before the each phototherapy treatment the indexes of erythema and melanine were defined by spectrophotometric method. The efficacy of treatments was assessed using the Psoriasis Area and Severity Index (PASI). The decrease of the cumulative dose and the duration of the treatment was registered in the groups using the salt baths with H.hal. and following phototherapy (UVB-bb) in comparison with salt bath and phototherapy or single phototherapy.

The decrease of PASI more than 70% was achieved in the group with salt baths with adding of H.hal. lysate, UVB-bb in 78,3%, salt baths with UVB-bb on 67,2 %, UVB-bb on 61,7%.

Abstract No: 75

Title: Methotrexate and hepatic toxicity in psoriatic arthritis and rheumatoid arthritis.

Authors: Carla Matias¹, Anabela Barcelos²

Affiliations: ¹ Internal Medicine - HIP, ² Rheumatology - HIP, Portugal

Text:

Objective: To evaluate retrospectively the hepatic toxicity of methotrexate (MTX) in patients with PsA and RA.

Methods: The study was designed to assess and compare hepatic toxicity of MTX in patients with PsA and RA. Data relating to hepatic toxicity of MTX was recorded (medical history including risk factors for liver disease and liver function test abnormalities). A transaminase level of two times the upper limit of normal on two or more occasions was taken to indicate hepatic injury. The data had been introduced in a base created for the analysis statistics program. Values of p <0,05 had been considered significant.

Results: The mean age was 48 (26-69 years) and 58 (24-88 years) for PsA and RA patients, respectively. The mean MTX dose was 15 mg/week in both groups and the mean disease duration was 8 years for RA and 6 years for PsA patients. The mean duration of MTX treatment was approximately 4 years in both groups. PsA patients had greater hepatic enzyme elevation than RA patients (33,3% vs 14,5%, respectively; p = 0,02). In PsA group, male patients were more affected than female patients. The gastrointestinal (GI) disturbance was an important adverse effect in RA patients (11%) and the main cause was nausea. There were no significant differences between PsA and RA patients in the incidence of alcohol consumption.

Conclusion: This study showed that methotrexate-treated PsA patients have a higher incidence of hepatotoxicity than methotrexate-treated RA patients. GI disturbance were a prevalent adverse effect in RA patients.

Abstract No: 76

Title: Usage of new localized UVB source in the treatment of psoriasis.

Authors: Bohdan Lytvynenko¹, Yuriy Andrashko², Aleksandr Litus², Irina Sharkan², Kuzma Khobzey³

Affiliations: ² Uzhgorod National University, ³ Institute of Psoriasis, Ukraine

Text:

Ultraviolet (UV) light is very effective treatment for the psoriasis and some other photosensitive dermatoses. Localized delivery of ultraviolet B radiation (UVB) may be a useful treatment for localized variants of psoriasis, vitiligo and other conditions. The usage of targeted UVB devices is effective for psoriasis with fewer UVB treatments and lower total UVB exposure than needed for total body UV treatment. To examine the clinical performance of a new targeted UVB lamp (290-320 nm; Lumera, Daavlin Inc) in the treatment of localized plaque-type psoriasis, 19 consecutive patients attending a phototherapy unit were treated three times a week with the UVB lamp for 8-20 sessions (median 14). The selected doses were based on the predetermined minimal erythema dose (MED) and its consequent increment. The efficacy of treatments was assessed using the Psoriasis Severity Index (PSI). It was measured every week during all courses. 68.4% of patients get >75% improvement in PSI and 22% showed complete clearance. Localized UV therapy is a useful modality for the treatment of localized variants of psoriasis with growing use for other dermatologic diseases.

Abstract No: 77

Title: Isotretinoin in association with phototherapy – our experience in psoriatic women.

Authors: Joana Dias Coelho¹, Filipa Diamantino¹, Fernando Guerra¹, Margarida Apetato¹

Affiliations: ¹ Centro Hospitalar de Lisboa Central, Portugal

Text:

Aims: The efficacy of the association of a systemic retinoid with phototherapy for the treatment of psoriasis is well known. It accelerates the response of psoriatic lesions, reduces the number of exposures required for clearing and eventually minimizes the deleterious long term cutaneous effects of phototherapy. Potential teratogenicity remains the primary concern with use in childbearing women. Isotretinoin has a mean elimination half-life of 25 hours with contraception recommended for one month after stopping its use.

Methods: Data of 27 women with psoriasis under isotretinoin in association with PUVA or UVBnb were analyzed; previous treatments, number of sessions, efficacy, side effects and duration of remission were evaluated.

Results: 27 women with ages ranging from 14 to 45 years (mean: 24,3); 23 had plaque type and 4 had guttata psoriasis. A familiar history of psoriasis was present in 55,6% of the patients. Isotretinoin-PUVA was realized in 19 patients and Isotretinoin-UVBnb in 8. Overall clear or almost clear response was 84,2% in the Isotretinoin-PUVA group (medium 15,8 treatments) and 75% in the Isotretinoin-UVBnb group (medium 18,3 treatments). Three patients had abandoned treatment. There were no serious side effects.

Conclusions: The authors believe that there is a potential for enhanced clinical results when using combined isotretinoin and phototherapy, being this association a good option when we treat childbearing women.

Abstract No: 78

Title: Topical psoralen-ultraviolet A therapy for palmoplantar psoriasis: a 12-year retrospective analysis

Authors: Filipa Diamantino¹, Joana Dias Coelho¹, Fernando Guerra¹, Margarida Apetato¹

Affiliations: ¹ Hospital dos Capuchos - CHLC, Portugal

Text:

Chronic palmoplantar psoriasis is a disabling condition characterized by hyperkeratosis or recurrent crops of sterile pustules on the palms and soles. Topical psoralen plus UVA (PUVA) avoids some of the unwanted side effects of systemic psoralens and has been successfully used in the treatment of

palmoplantar psoriasis.

Aims: To evaluate the effectiveness of topical PUVA therapy for palmoplantar psoriasis and to describe our method of administration of this treatment modality.

Methods: We conducted a retrospective study of 65 patients, 16 to 74 years of age, with palmoplantar psoriasis, who received topical PUVA therapy. The affected areas were painted with a 0,1% 8-MOP solution and thirty minutes later exposed to incremental doses of UVA light (starting with 0,25-0,5 J/cm²), two times a week, until the dermatosis subsided or cleared. Of the patients, 26 (40%) were treated with a combination of topical PUVA and systemic therapies: retinoids in 22 and ciclosporin in 4 patients.

Results: The mean number of treatments was 19,4 (range 8 to 38) and the mean total dose of UVA received was 73,2 J/cm² (range 4 to 218). Altogether 59 of 65 patients responded well with 38 patients (58,5%; 18 with associated systemic therapy) showing a considerable improvement and 21 (32,3%, 5 with associated systemic therapy) cleared. Six patients (9,2%) had no response to treatment. No relevant adverse side effects were observed, except for mild erythema in a few patients.

Conclusions: Our results confirm that topical UVA therapy is an effective and safe treatment option for palmoplantar psoriasis.

Abstract No: 79

Title: Pentraxin 3: A Novel Marker of Inflammation in Psoriatic Arthritis Patients

Authors: Suzan Abou-Raya¹, Anna Abou-Raya¹, Madihag Helmi²

Affiliations: ¹ University of Alexandria, ² Medical Research Institute, Egypt

Text:

Objective: As psoriatic skin and joints fosters inflammation, the aim was to evaluate PTX3 as a marker for disease activity in PsA patients and to assess the usefulness of PTX3 as a novel diagnostic tool reflecting the inflammatory activity in PsA.

Methods: The study population comprised 67 patients with PsA and 42 healthy age and sex matched control subjects. Thirty-five of the 67 patients were active. Serum levels of high sensitivity C-reactive protein (hsCRP), ESR and fibrinogen and the proinflammatory cytokines interleukin-6 (IL-6) and tumour necrosis alphas (TNF-alpha). PTX3 was measured using a sandwich enzyme-linked immunosorbent assay (ELISA).

Results: Plasma levels of PTX3 were significantly higher in PsA patients compared to controls, 28.7ng/ml versus 2.1ng/ml, $p < 0.0001$. Furthermore, PTX3 levels were significantly higher in active PsA patients compared to inactive PsA patients, 37.9ng/ml versus 20.8ng/ml, $p < 0.003$. Plasma levels of PTX3 correlated significantly with disease activity in psoriasis (PASI score) and with the number of tender and swollen joints respectively. There was a modest increase in the acute phase reactants hsCRP, ESR and fibrinogen. IL-6 and TNF-alpha were significantly higher in the PsA patients compared to the controls. There was a significant positive correlation between PTX3 levels and the levels of proinflammatory cytokines IL-6 and TNF-alpha ($p < 0.001$, $r = 0.537$; $p < 0.05$, $r = 0.519$ respectively).

Conclusions: These findings suggest that PTX3 may be regarded as a reliable biomarker of disease activity in psoriatic arthritis and may serve as a useful prognostic tool for monitoring disease progression.

Abstract No: 80

Title: TNF-Alpha, IL-6, IL-17 and IL-18 in Psoriasis and Psoriatic arthritis: Are they reliable disease severity and disease activity biomarkers?

Authors: Suzan Abou-Raya¹, Anna Abou-Raya¹, Madihag Helmi²

Affiliations: ¹ University of Alexandria, ² Medical Research Institute, Egypt

Text:

Objective: As psoriatic skin and joints fosters inflammation, the aim was to evaluate PTX3 as a marker for disease activity in PsA patients and to assess the usefulness of PTX3 as a novel diagnostic tool reflecting the inflammatory activity in PsA.

Methods: The study population comprised 67 patients with PsA and 42 healthy age and sex matched control subjects. Thirty-five of the 67 patients were active. Serum levels of high sensitivity C-reactive protein (hsCRP), ESR and fibrinogen and the proinflammatory cytokines interleukin-6 (IL-6) and tumour necrosis alphas (TNF-alpha). PTX3 was measured using a sandwich enzyme-linked immunosorbent assay (ELISA).

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Conclusions: These findings suggest that PTX3 may be regarded as a reliable biomarker of disease activity in psoriatic arthritis and may serve as a useful prognostic tool for monitoring disease progression.

Abstract No: 81

Title: The Weekly versus daily administration of oral methotrexate (MTX) for the treatment of plaque psoriasis a randomized controlled clinical trial.

Authors: Mohammad Radmanesh¹, Zahra-beigum Moosavi¹, Behnam Rafiei², Niloofar Sina³, Nahid Bagheri⁴

Affiliations: ¹ Jondishapour University, ² GP, ³ Private practice, ⁴ Private practice, Iran

Text:

MTX is usually administered weekly because of the general and non-documented idea that daily administration is remarkably more hepatotoxic. Many patients cannot tolerate single or divided weekly MTX regimens and may better tolerate smaller MTX doses with shorter intervals.

Objective: To study the side effects and efficacies of oral daily 2.5 mg MTX for 6 days, versus 15 mg weekly in 3 divided doses with 8 hours apart. Patients and

Methods: 101 patients were scheduled to receive 2.5mg oral MTX daily for 6 days (patients) and 101 more patients (controls) were scheduled to receive 15 mg MTX weekly in 3 divided doses with 8 hours apart. The patients were followed monthly for 4 months. CBC, Liver function tests and PASI scores were measured at the time of admission, 2 weeks later and then monthly for 4 months. The improvement in PASI scores were divided into 3 categories: improvement more than 75% was considered as significant, 25-75% as moderate and less than 25% as poor.

Results: 60 (patients) and 81 controls showed significant response. 19 patients and 14 controls responded moderately and 22 patients and 6 controls responded poorly. 45 patients and 33 controls developed liver enzyme rising. Nausea, fatigue, and G.I. upset recorded in 4 patients and 30 controls.

Conclusion: The nausea, vomiting, and fatigue were significantly lower among patients treated daily, but less liver enzyme rising and more efficacy recorded among control patients treated weekly.

Abstract No: 82

Title: The self administered Psoriatic Arthritis Screening Questionnaire (PASQ) is a sensitive tool in detecting early and established psoriatic arthritis patients

Authors: Majed Khraishi¹, Ian Landells²

Affiliations: ¹ Memorial University of Newfoundland, ² Nexus Clinical research and Memorial Univ., Canada

Text:

Background: Early detection and treatment of psoriatic arthritis (PsA) is essential to prevent damage and comorbidities. We designed a simple screening tool: the psoriasis and arthritis screening questionnaire (PASQ) to facilitate identifying patients at high risk of developing PsA. Such a tool would be suitable for dermatologists and family physicians.

Objectives: To develop a simple self-administered screening tool for detecting PsA in established as well as early patients: comparing its sensitivity to the CASPAR criteria for diagnosing PsA.

Methods/Materials: An evaluation of the PASQ, containing ten questions and a diagram for patients to label where they have/had joint swelling/pain in a rheumatology and dermatology clinic based population of psoriasis / PsA patients with a sub-population of early patients (less than two years duration). The CASPAR criteria for each subject were applied to confirm PsA. The receiver operating curve (ROC) using MedCalc® software was obtained. Descriptive statistics were obtained by SPSS.

Results: Data were collected, as a first stage, on 58 established PsA, 29 with psoriasis only. The PASQ was then tested on 28 early PsA patients. Analysis of the PASQ scores of the initial 87 patients with the ROC curve yielded an optimal 86.27% sensitivity, and 88.89 % specificity. In the 27 early PsA patients only one scored less than the cutoff score of 8.

Conclusions: The PASQ is a simple patient self administered tool with high sensitivity and specificity that is effective at detecting early and established PsA patients.

Abstract No: 83

Title: Detection of psoriasis patients with a patient-questionnaire from dermatology outpatient clinics in Germany

Authors: Peter Härle¹, Wolfgang Hartung², Ulf Müller-ladner³, Ingo Tarner⁴, Thomas Vogt⁵, Martin Fleck²

Affiliations: ¹ Katholisches Klinikum Mainz, ² Asklepios Rheumatology Clinic Bad Abbach, ³ Kerckhoff-Clinic, Bad Nauheim, ⁴ Kerckhoff Clinic, Bad Nauheim, ⁵ Dermatology, University of Regensburg, Germany

Text:

Background: Psoriasis (Ps) patients are primarily seen by dermatologists. However, psoriasis arthritis (PsA) may be detected later during disease course. In order to detect PsA at early time points, we developed a patient questionnaire (GEPARD=German Psoriasis ARthritis Diagnostic questionnaire) with a sensitivity of 89% and a specificity of 73%. Now we tested the patient questionnaire in routine dermatology practice.

Aim: Can patients with PsA be detected by the GEPARD patient questionnaire in dermatology out-patient clinics?

Methods: We handed out the GEPARD to 12 dermatology practices in southern Germany. The questionnaire was given to Ps patients to fill out in the waiting area. Questionnaires were returned via fax. All patients were contacted by phone and invited for a rheumatology visit at our university. The patients were evaluated for arthritis by clinical examination, arthrosonography, conventional radiography, MR, and szintigraphy.

Results: We examined 54 patients of which 34 (63%) could be classified as PsA according to the CASPAR criteria, 20 patients (37%) did not classify. From these classified 1 as RA, 8 as arthralgia, and 11 with no complaints. In patients with arthralgia 2 had arthritis detected by sonography, 2 sacroiliitis by MR, and 1 had dactylitis by szintigraphy. 3 patients without complaints had arthritis detected by sonography and 2 by MR.

Conclusion: The GEPARD patient questionnaire can be used to filter out PsA-patients from a dermatology out-patient pool and serves as a tool of cooperation between dermatologists and rheumatologists.

Abstract No: 84

Title: Lattice system physician's global assessment is validated for assessing psoriasis.

Authors: Charles Ellis¹

Affiliations: ¹ University of Michigan Medical School, United States

Text:

Aims: Assess measures of psoriasis severity for studies submitted to regulatory agencies.

Methods: Three separate validation studies examined the commonly-used Psoriasis Area and Severity Index (PASI) and the Lattice System-Physician's Global Assessment (LS-PGA), designed by the author to solve many deficiencies of PASI. In three randomized evaluations of psoriasis patients, 14, 17, and 19 physicians evaluated 16, 35, and 20 patients in England, US, and Canada, respectively.

Results: The rating systems were well correlated with each other ($r > 0.8$, reported in two studies). In the US study, inter-rater reliability for LS-PGA ($\sigma = 1.7$) was better than that for PASI ($\sigma = 8.8$). When corrected for the varying number of final scores, the LS-PGA was still more consistent than PASI (relative $\sigma = 2.2$ and 2.7 , respectively). In the study from England, inter-rater reliability by intraclass correlation coefficient for PASI was 90% (95% confidence interval 83%, 97%) which was slightly better than that for LS-PGA (84%; CI 73%, 95%). In the US study, within-rater variation for PASI among physicians inexperienced in psoriasis clinical trials ($\sigma = 3.2$) was almost 3 times higher than that for experienced investigators ($\sigma = 1.2$); no such difference occurred for LS-PGA ($\sigma = 0.5$ and 0.4 , respectively). Although PASI was more consistent among rheumatologists in the Canadian study, LS-PGA and PASI were equally consistent among dermatologists. Differences among the three studies may result from design aspects.

Conclusions: While PASI provides a numerical score from 0 to 72, the LS-PGA provides a stepped score from "clear" to "very severe". Both are reliable measures for assessing psoriasis, particularly among dermatologists.

Biomarkers and Imaging

Abstract No: 85

Title: Clinical forms of psoriatic arthritis and immuno-genetic determinants at patients in Republic of Moldova.

Authors: Eugeniu Russu¹, Liliana Groppa², Constantin Babiuc², Gheorghe Muset², Natalia Isac², Grigore Moraru²

Affiliations: ¹ State Medical University, ² Republic Of Moldavia

Text:

The aim of this study was to analyze: inflammatory manifestations in patients with psoriatic arthritis in Republic of Moldova; associations with immunological disorders by appreciation of lymphocytes cell determinants (CD) and human leukocyte antigens (HLA-antigens) and identifying markers for aggressive joint disease

Method: Ninety nine patients with psoriatic arthritis with defined joint disease were examined clinically, radiologically, and with laboratory-based analyses. Disease classification and diagnosis have been based on CASPAR criteria.

Results: We have found a high prevalence of HLA-B7, B17, B27, B37 and HLA-A2, A3, A7 and A29, but the strongest predictive factors among patients with polyarthritis and axial disease of psoriatic arthritis for an aggressive disease were HLA-A3, A29, B27, and B37. An association was found

between CD determinants of lymphocytes, but most important were: for DPI and oligoarthritis CD3, CD8; for polyarthritis form CD2, CD4, CD8; for axial disease CD4, CD8 and CD22, and for mutilate arthritis CD2, CD4, CD19, CD20, CD22 with significant linkage for all groups ($p = 0.001$, $RRf = 2.4-3.3$).

Conclusion: The prevalence of inflammatory joint manifestations, such as polyarthritis, axial disease and mutilate arthritis was high among patients with psoriatic arthritis in Republic of Moldova. There were several strong association between HLA-antigens (B7, B17, B27, B37, A2, A3, A7, A29), lymphocytes CD2, CD3, CD4, CD8, CD19, CD20, CD22 and psoriatic arthritis. The strongest predictive factors among patients with polyarthritis and axial disease of psoriatic arthritis for an aggressive disease were HLA-A3, A29, B27, B37 with a significant linkage ($p = 0.0001$, $RRf = 2.9$).

Abstract No: 86

Title: Low Field MRI with prototype finger coil for studying nail unit in psoriatic arthritis (PsA) patients.

Authors: Ernesto Soccia¹, Marco Amedeo Cimmino², Mariangela Atteno¹, Salvatore Iervolino¹, Antonio Del Puente¹, Marco Salvatore¹, Raffaele Scarpa¹

Affiliations: ¹ University Federico II, ² University of Genova, Italy

Text:

Purpose: We tested a dedicated finger coil in low field scanner to study nail unit in PsA patients.

Patients and Methods: 30 patients with PsA, 13 with clinical evident onychopathy and 17 without, were studied with a low field MRI (E-scan, Esaote, Genova, Italy). The MRI scan was performed with a prototype coil for the study of finger in a 0.2 T device (E-scan XQ ESAOTE GROUP ITALY). For each finger, both longitudinal and axial scans were performed, with a slice thickness of 2.0 mm and an inter-slice gap of 0.3 mm.

Results: Surface irregularity and thickness alteration were the commonest MRI findings of nail involvement occurring in 100% of the cases. Nail score was higher in patients with clinical evidence of onychopathy than in those without. Likewise, 100% of the patients showed MRI abnormalities of distal phalanx. Score was more marked in patients with onychopathy than in those without. The involvement of distal interphalangeal joint was present in 80% of the cases (84.6% of patients with onychopathy and 76.5% without). Onychopathic patients showed a marked MRI DIP joint involvement in 8 cases and mild in 3 cases, while patients without onychopathy showed marked changes in 4 and only minimal changes in 9 cases. Considering the entire group of patients, the MRI involvement of DIP joint was always associated with MRI DP changes and in no case MRI DIP joint involvement was present alone.

Conclusion: This research confirmed our previous results obtained both in high and low field MRI scanner.

Abstract No: 87

Title: Whole body magnetic resonance imaging of peripheral and axial joints in patients with psoriatic arthritis

Authors: Susanne Juhl Pedersen¹, Jakob Møller², Inge Juul Sørensen³, Mikkel Østergaard⁴

Affiliations: ¹ Gentofte and Herlev University Hospitals, ² Dep. of radiology, Herlev Hospital, ³ Dep. of rheumatology, Hvidovre Hospital, ⁴ Rheumatology, Hvidovre Gentofte Hospital, Denmark

Text:

Aims: In oncology, whole body magnetic resonance imaging (WBMRI) is a new imaging tool being used in monitoring of cancer patients with metastases. In patients with psoriatic arthritis (PsA) MRI can show subcutaneous inflammation, synovitis, tenosynovitis and bone marrow edema. The aim of this pilot study was to investigate WBMRI in peripheral and axial joints in

patients with PsA.

Methods: Eight patients (6 women, 2 men, median age 46 years, range 36-79) with 1) PsA according to Moll and Wrights criteria 2) >3 tender and >3 swollen peripheral joints (76/78 joint count) and 3) >1 tender and swollen MCP or PIP-joint or >1 dactylitis in the hand were included in the study. WB-MRI at 3.0 Tesla including short-tau-inversion-recovery (STIR) and T1-weighted sequences before and after intravenous injection of Dotarem 0.1mmol/kg was performed. Prior to the analysis the reader was calibrated by looking at WBMRI of 2 healthy persons. The WBMRI was screened for pathology without knowledge of clinical data.

Results: In general, image quality was good. Imaging of sufficient quality of hands and feet was difficult, but improved considerably during the study, mainly due to improvements in patient positioning. The WBMRIs showed bone marrow edema and/or subcutaneous inflammation in feet (n=5 patients), synovitis/arthritis in ankle (n=5) and knee (n=5) joints, sacroiliitis (n=2), and bone marrow edema and subcutaneous inflammation at acromioclavicular joints (n=2) and hands (n=1).

Conclusion: Whole body MRI is a new imaging modality that may be useful for patients with PsA. However, further validation studies are needed.

Abstract No: 88

Title: Accumulation of altered aspartyl residues in erythrocyte membrane proteins from psoriasis patients

Authors: Anna Balato¹, Patrizia Galletti², Nicola Balato¹, Stefania D'Angelo³, Filomena Flora², Lucia Gallo¹, Vincenzo Zappia³

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Text:

Aims: Natural proteins undergo post-biosynthetic alterations, such as deamidation of asparaginyl residues, resulting in the formation of potentially harmful altered L-isospaspartyl residues; these residues can be repaired by a specific L-isospaspartate-(D-aspartate)-protein-O-methyltransferase (PIMT). The formation of such abnormal residues is enhanced by an oxidative microenvironment. As chronic oxidative stress, related to inflammation, is a feature of psoriasis, we tested the hypothesis that deamidated proteins may build up in erythrocyte proteins from psoriasis patients. The repair system is indeed critical in this model, where protein synthesis is absent.

Methods: Blood samples were obtained from 36 patients (25 males, 11 females) affected with moderate to severe psoriasis, and 36 healthy controls (10 males, 26 females). We evaluated the level of damaged residues through an in situ assay, consisting in the measurement of intact erythrocytes membrane proteins methylesterification.

Results: We demonstrated a significant accumulation of isospaspartyl residues in erythrocyte membrane proteins from psoriasis patients (182,129±67,367 proteins in patients vs 115,870±54,041 DPM/mg in controls; p<0.00001). This result is not attributable to a low efficiency of the methylation/repair process, since intracellular levels of S-Adenosylmethionine, the methyl donor, and S-Adenosylhomocysteine, the demethylated product and powerful competitive inhibitor of methyltransferases - as well as PIMT specific activity - are similar in patient and control groups. Moreover, the reported increase in homocysteine plasma level was confirmed in our study population (19.5±16.5 microM in patients vs 10.9±4.0 microM in controls; p=0.006).

Conclusions: Our findings support the hypothesis that protein instability at asparagine sites of erythrocyte membranes is a biochemical feature of psoriasis.

Abstract No: 89

Title: Effect of biological therapy on plasma levels of MCP-1 in plaque psoriasis patients.

Authors: Serena Lembo¹, Maria Luigia De Bonis², Marianna Raimo², Serena

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Text:

Psoriatic cytokine-activated keratinocytes represent an important source of chemokines involved in the recruitment of specific leukocyte populations in the skin. In particular, an excess of Monocyte Chemoattractant Protein-1 (MCP-1) is observed in plasma of psoriasis patients.

A single nucleotide polymorphism in the promoter region of the MCP-1 gene (A2518G) is associated with a higher MCP-1 expression; this correlation has been reported in many inflammatory diseases. Moreover, the plasma concentration of MCP-1 is enhanced by TNF, the main target of immunotherapy with biologics in psoriasis patients.

Aims and Methods: i) to evaluate the increase of MCP-1 level in plasma of patients with psoriasis. To this purpose, 30 patients and 10 healthy controls were enrolled; ii) to relate MCP-1 plasma concentration with the clinical improvements due to biologic therapy. Moreover, plasma levels of homocysteine (Hcy), whose role in inflammation has been reported, were evaluated, together with the occurrence of MCP-1 A2518G and MTHFR C677T polymorphisms. The latter, indeed, lead to a thermolabile isoform of the enzyme affecting Hcy removal. To this end, blood samples were obtained from 18 patients on therapy with anti-TNF or anti-CD11 drugs.

Results: Our results can be summarized as follows: 1) MCP-1 plasma levels were significantly increased in psoriasis patients (158.6 pg/ml vs 132.8 pg/ml; pclinical improvement); however, the treatment was unable to reduce MCP-1 plasma concentration, regardless the drug used or polymorphisms combination; 3) a slight Hcy plasma level decrease was detected in patients on anti-TNF α treatment, whereas Hcy concentration was increased in patients on anti-CD11 treatment.

Conclusions: Our data demonstrate that clinical response to biologics does not directly correlate with MCP-1 plasma levels.

Abstract No: 90

Title: Dendritic Cell-Surface Transmembrane Protein (DC-STAMP) is a biomarker for osteoclast precursors in psoriatic arthritis.

Authors: Yahui Grace Chiu¹, Kofi Mensah², Changyong Feng², Edward Schwarz², Christopher Ritchlin²

Affiliations: ¹University of Rochester, ²United States

Text:

In our previous studies, we demonstrated that osteoclast precursors (OCP) are elevated in psoriatic arthritis (PsA) patients with erosive arthritis and in a subset of psoriasis (PsV) patients without musculoskeletal symptoms. Determination of OCP frequency requires cell culture, which is expensive and labor intensive. Herein, we examined the potential of Dendritic Cell-Surface Transmembrane Protein (DC-STAMP), a transmembrane protein required for cell-to-cell fusion during osteoclastogenesis, in serving as a biomarker for OCP in these patients. To this end, we first established a novel anti-DC-STAMP monoclonal antibody 1A2. 1A2 and commercially available polyclonal antibody KR104 recognized the same single 53 Kd band on Western blot. The surface expression of DC-STAMP was monocyte-specific. Monocytes expressing a higher surface level of DC-STAMP (DC-STAMP^{high}) had higher OC formation and bone wafer resorption activities. The FACS weighted mean fluorescence intensity (WMFI=MFI x percentage of DC-STAMP+ cells) of PsA was 3501± 229 compared to 1259 ± 85 in controls (p<.008). An elevated OCP frequency was correlated with a higher ratio of DCSTAMP+/DCSTAMP-cells in PsA patients. Importantly, PsA patients and controls showed a very distinct expression pattern of DC-STAMP on their PBMC. In conclusion, our results demonstrate that osteoclasts arise from the DC-STAMP^{high} fresh monocytes and these cells are increased in PsA patients. Analysis of the DC-STAMP population in terms of WMFI and the percentage of DC-STAMP^{high} cells may

preclude the need for cell culture and may further clarify the role of OCP as a severity marker in PsA and as an arthritis susceptibility marker in PsV.

Quality of Life

Abstract No: 91

Title: Quality of life in psoriatic patients from Buenos Aires Argentina.

Authors: Ignacio Dei-cas¹, César Lagodín², Milagros Branciforte², Liliana Cuellar², Paula Tordoya², Miguel Allevato²

Affiliations: ¹Hospital de Clínicas José de San Martín, ²Argentina

Text:

Aims: The purpose was to investigate psoriasis-related QoL and its relationship with age, gender, marital status, education level, time with psoriasis and severity. **Methods:** In this observational, cross-sectional study psoriatic patients attending a psoriasis specialty clinic at the Hospital de Clínicas from Buenos Aires were invited to complete a form that included questions on demographic and medical data and a multidimensional quality of life assessment comprising the Psoriasis Disability Index (PDI), and the Psoriasis Life Stress Inventory (PLSI). Dermatology Life Quality Index (DLQI) and Skindex 29 were the dermatologic questionnaires. The severity of the psoriasis of the patients was measured using PASI. Subjects were excluded if they were under treatment during the last 60 days.

Results: A total of 162 patients were assessed. The majority of cases were female (53.1%) and the mean age at study inclusion time was 46 years. Mean time with psoriasis and PASI were 15 years and 12.2 respectively. The mean value of the PDI was 9.3, which represents a percentage of global disability of 20.7; the mean PLSI was 15.1 (33.5% of disability); the mean DLQI 8.8 (29.3% of disability) and the mean Skindex 29 44.8 (38.6% of disability). Psoriasis related QoL was only related to psoriasis severity measured by PASI ($p=0.0000$) and it was independent of the QoL questionnaire used. They all indicate that to higher severity of the psoriasis, upper negative impact in the health-related quality of life. PDI, PLSI, DLQI and Skindex 29 correlated well with each other ($r = 0.51-0.87$; $P < 0.01$). Male were more impaired in personal relationships measured by PDI and female were more affected by psoriasis symptoms measured by the Sindex 29.

Conclusion: In our sample only psoriasis severity gave an indication of psychosocial disability. PDI, PLSI, DLQI and Skindex 29 were comparable tools.

Abstract No: 92

Title: Psoriasis and quality of life - Student's Health Institute in Belgrade results

Authors: Lida Tomic Radovanovic¹, Alma Krdzovic Marjanovic², Jasna Czurda Potic²

Affiliations: ¹Student's Health Institute in Belgrade, ²Serbia

Text:

Dermatological department of Students Health Institute in Belgrade examine from 18.000 to 19.000 patients per one year. 3.9% of our patients suffer from psoriasis. Psoriasis vulgaris is complex and chronic skin disease having a strong impact on the physical and mental well being of the patient. This condition can have a profound impact on a person's quality of life, particularly in this young-student's population. We investigated the impact of the quality of life of 154 students from 19 to 26 years old, 81 males and 73 females. Newly and previous psoriatic patients are evaluated. Anonymous questionnaires included psychosocial and physical impact of psoriasis and

the effectiveness of the managements of their diseases. The Psoriasis Disability Index (PDI) score of newly psoriasis patients was 10.58 and PDI of previous psoriasis patients was 14.88. Concerning the PDI, the following dimensions: daily activities and social relations are significantly improved ($P < 0.02$) which might have consequences on patient lives. The improvements of the quality of life in their physical health were statistically significant ($P < 0.03$). Further analysis may reveal how satisfaction within treatment may differ.

Abstract No: 93

Title: The effects of climate therapy on people with psoriatic arthritis

Authors: Sonja Bäckman¹, Sonja Bäckman¹, Heikki Hurri², Hannu Kautiainen², Leena Koulu³, Leena Paimela², Mirja-Liisa Rontu¹

Affiliations: ¹The Finnish Psoriasis Association, ²Orton Foundation, ³Turku University Hospital, Finland

Text:

Aims: The aim of the study was to find out the effects of climate therapy on people with psoriatic arthritis and how long the effects last.

Methods: The study has mainly been carried out as a survey. We asked about pain and other symptoms, use of medication, exercise habits, quality of life, ability to work and costs of medication and treatment. The questionnaire was sent to 72 participants. The follow-up period lasted up to six months and included four questionnaires. In addition to a survey twelve persons were interviewed to find out the consequences that a rehabilitation period has on participants' daily life.

Results: Psoriatic arthritis patients experienced a clear relief in pain and stiffness of their joints and their general condition. These changes showed statistical significance through the whole follow-up period. Also the generic life quality indicator SF-36 showed positive effects in most of the studied areas through the follow-up. Ability to work improved statistically significantly during the climate therapy course but fell gradually after that. A slight decrease in direct health care costs was observed. The interview raised up ways of support participants got in their psychosocial areas of life during the course.

Conclusions: Climate therapy has clear physical as well as psychological and social effects on people with psoriatic arthritis. It is one way to support patients' functioning and working ability and quality of life. However, further research is needed to find out its efficiency compared with other rehabilitation methods.

Abstract No: 94

Title: Impact of Adalimumab on Quality of Life and Depression in Psoriasis Patients: Results From PRIDE

Authors: Nick Bansback¹, Kim Papp², Charles Lynde³, Wei Zhang¹, Hong Qian¹, Marie-josée Martel⁴, Henrique Teixeira⁴

Affiliations: ¹Centre for Health Eval & Outcomes Sci, ²Probit Medical Research, ³Lynde Centre for Dermatology, ⁴Abbott Laboratories, Canada

Text:

Aim: To evaluate the effect of adalimumab on health-related quality of life and patient-reported outcome (PRO) measures, including depression and health utility in patients with active plaque psoriasis.

Methods: PRIDE (A Canadian Open-Label Access Program to Evaluate the Safety and the Effectiveness of Adalimumab When Added to Inadequate Therapy for the Treatment of Psoriasis) was an open-label, multicenter, Phase IIIb study in Canada. Patients with active moderate to severe plaque psoriasis who failed to respond to, or were intolerant of, prior therapies (phototherapy, cyclosporine, methotrexate, and/or oral retinoids) received adalimumab (80 mg) at Week 0 followed by adalimumab (40 mg) every other week beginning at Week 1 through Week 23. Changes in the Der-

matology Life Quality Index (DLQI), Beck Depression Inventory-II (BDI), and EQ-5D between baseline and Week 16 were evaluated.

Results: A total of 203 patients (male, 61%; mean age, 46 years; mean PASI score, 20) were enrolled at 26 sites. At baseline, mean DLQI, BDI, and EQ-5D were 12.9, 9.3, and 0.79, respectively. At Week 16, the mean DLQI score had improved to 2.9 (change=10.0; $p<0.0001$), the BDI was reduced to 5.2 (change=4.2; $p<0.0001$), and the EQ-5D had improved to 0.89 (change=0.10; $p<0.0001$). Improvements were even greater in patients with a baseline DLQI score >10 .

Conclusions: Adalimumab treatment was associated with statistically significant improvements in PROs, including depression. The results of this open-label study were consistent with outcomes observed in Phase III trials of adalimumab, confirming that adalimumab has a substantial impact on patient health-related quality of life.

Abstract No: 95

Title: Psycho-social implications of psoriasis

Authors: Mirona Ioana Marcu¹, Caius Solovan²

Affiliations: ¹ Ministry of the Interior, ² Univ. Of Medicine and Pharmacy Timisoara, Romania

Text:

The aim: The present study aims to reveal the link between different psycho-social factors and the manifestation and evolution of psoriasis.

Methods: The study sample consisted of 40 patients with psoriasis. The control sample was formed by 40 healthy persons, equivalent with the study sample in respect of the following variable: age, gender, background, marital status. The subjects were asked to fill in: Dermatology Life Quality Index, Our Own Quality of Life Questionnaire, Anamnestic Questionnaire, Affective Distress Profile, Scale of General Beliefs and Attitudes, Rosenberg Self Esteem, and Self-Efficacy Scale.

Results: Significant differences between the two samples were obtained regarding the negative functional emotions (sadness/depression, worry/anxiety) and the same dysfunctional ones (sadness/depression, worry/anxiety) as well as the positive emotions. Psoriatic patients are characterised to a greater extent by negative dysfunctional emotions in comparison with healthy persons who are characterised by higher levels of negative functional emotions. Other significant differences were noted with respect to life quality, level of self-esteem and the general beliefs and attitudes. Other findings have indicated differences between the two samples in connection with the following areas: professional, health, relation with friends, perception of own body, sex life, dependence on treatment to cope with everyday tasks, visits to doctors, etc.

Conclusions: Knowing these aspects related to the quality of life in patients with psoriasis and the psycho-clinical dimensions of the disease ensures some effective strategies of psychological and psychotherapeutical approach to the patients as well as the elaboration of appropriate social integration programmes.

Abstract No: 96

Title: Quality of life assessments that measure a single point in time may underestimate lifetime impact

Authors: Elizabeth Seidler¹, Alexa Kimball¹

Affiliations: ¹ Massachusetts General Hospital, United States

Text:

Aims: To determine if the results of a quality of life instrument used to assess disease impact in psoriasis patients at a current point in time is consistent with patients' longer term assessments using the same questions.

Methods: Psoriasis patients aged 18 and older were asked to complete a

modified Dermatology Life Quality Index (DLQI) as part of a larger questionnaire. The modified DLQI used a numeric visual analogue scale and asked the same questions over the past week (as in the standard DLQI), the past year, and over a lifetime with psoriasis. Three overall scores were assigned to each patient, one for each time period. The highest score for each time period was 30, corresponding to the most impaired quality of life.

Results: Eighty-two subjects completed the survey in this interim analysis. The average modified DLQI score for the past week was significantly lower than for the past year (8.4 vs. 11.8, p less than 0.01), and both were significantly lower than over a lifetime (8.4 and 11.8 vs. 15.7, p less than 0.01). Average disease duration was 21 years. Modified DLQI scores over a lifetime tended to increase with worse severity over a lifetime.

Conclusions: On average, psoriasis patients reported a significantly worse quality of life over a lifetime than in the past week or year using the same questions modified to reflect these time periods. This demonstrates that current point-in-time questionnaires may not accurately reflect the cumulative burdens of psoriasis.

Abstract No: 97

Title: Depressive Symptoms and Quality of Life in Psoriatic Patients with Different Lesion Localizations

Authors: Konrad Janowski¹, Stanislaw Steuden¹, Aldona Pietrzak², Grazyna Chodorowska², Dorota Krasowska², Ilona Gradus¹, Lukasz Kaczmarek¹

Affiliations: ¹ Catholic University of Lublin, ² Medical University of Lublin, Poland

Text:

Background: Psoriasis has been known to exert detrimental effects on quality of life and facilitate depression in afflicted individuals. It is still unclear, however, which psoriasis characteristics are essential for these effects. The objective of this study was to verify whether levels of depressive symptoms and quality of life are affected by localization of psoriasis plaques.

Methods: One-hundred four patients with psoriasis took part in the study and completed measures of health-related quality of life (Skindex-29), depression (Beck Depression Inventory) and social support (Disease-related Social Support Scale). Data were also gathered on several clinical characteristics of the disease such as localization of lesions, severity, percent of lesional skin, disease duration, number of hospitalizations).

Results: Patients with lesions localized on easily visible body areas had significantly lower quality of life and significantly higher depression levels than patients with lesions localized on easily covered body areas. Patients with lesions localized on easily visible body areas had also significantly higher record of previous hospitalizations, however did not significantly differ from those with covered lesions with respect to perceived social support, global psoriasis severity (PASI), percent of lesional skin or disease duration.

Conclusions: Localization of psoriasis plaques on easily visible body areas may lead to more frequent hospitalizations and be an important factor contributing to compromised quality of life and elevated depression, irrespective of other clinical or psychosocial variables.

Abstract No: 98

Title: Coping Strategies and Disease-Related Appraisals in Psoriatic Patients with Different Lesion Localizations

Authors: Konrad Janowski¹, Stanislaw Steuden¹

Affiliations: ¹ Catholic University of Lublin, Poland

Text:

Background: Localization of psoriasis lesions on easily visible body areas has been linked to unfavorable adaptational outcomes, such as lowered quality of life. We hypothesized that this effect could follow from differences

in cognitive appraisals attributed to psoriasis and from differences in coping strategies adopted by patients with lesions localized on visible vs. covered body areas.

Methods: One-hundred seventy-four patients with psoriasis took part in the study and were evaluated on questionnaire measures of strategies of coping with disease-related stress (Ways of Coping Questionnaire), cognitive appraisals attributed to psoriasis (Disease-Related Appraisals Scale), quality of life (Skindex-29), and personality (NEO-Five Factor Inventory). Other data were also collected on relevant psoriasis clinical characteristics, including localization of lesions.

Results: Patients with easily visible skin lesions had significantly lower quality of life than those with lesions localized on covered body areas. When compared to patients with lesions localized on covered body areas, those with lesions localized on visible body areas significantly more frequently appraised their disease as a threat or obstacle/loss, and used more frequently such coping strategies as seeking solutions, resignation, self-blame, and escape-avoidance. No significant differences between these two groups were observed on any of the five basic personality dimensions.

Conclusions: Patients with psoriasis whose lesions are localized on easily visible body areas tend to attribute more unfavorable cognitive appraisals to their disease and adopt less effective coping strategies, which may be responsible for lowered quality of life. The mechanisms accounting for this tendency are probably related to involvement of social factors.

Abstract No: 99

Title: Development of a composite disease activity score in psoriatic arthritis.

Authors: Aizad Mumtaz¹, Phil Gallagher², Brian Kirby², Laura C.Coates³, Rob-in Waxman³, Phillip Helliwell³, Oliver Fitzgerald⁴

Affiliations: ¹ St Vincents University Hospital Dublin, ² St Vincents University Hospital, Ireland ³ University of Leeds, United Kingdom ⁴ St Vincent University Hospital, Ireland

Text:

Background: Psoriatic Arthritis presents with a complex array of clinical features. There is no agreed set of domains and outcome measures to adequately define the spectrum of the disease. Objectives: To develop a composite disease activity index for Psoriatic Arthritis and to further test its ability to define disease severity, predict treatment change and measure the response to treatment.

Methods: All patients examined satisfied the CASPAR criteria for diagnosis of Psoriatic Arthritis. Five domains were used. These included joint, skin, dactylitis, enthesitis and back involvement. Specific instruments were employed to score and determine the extent and effect on quality of life and function. The following instruments were applied; joint (68 tender, 66 swollen joint counts and the HAQ), enthesitis (Leeds enthesal index and the HAQ), spine (BASDAI, ASQOL), skin (PASI, DLQI) and dactylitis (digit count and HAQ). Disease activity was then graded as mild, moderate and severe using these instruments on a severity score of 0 to 3. The maximum attainable score was 15. Patient and physician related quality of life measures were also taken into consideration. A mean CDAI was developed to overcome the problem of patients without any particular involvement of a domain.

Results: 71 patients were analysed. (41 female, 30 male). The mean age was 47 years with a range of (20-73). Spearman's rank coefficient was applied to check for correlation between the CDAI, CDAI (mean), patient and physician global assessments. Both scores showed significant correlation to each other and to the quality of life measures.

Conclusion: The CDAI is an effective tool to describe not only the disease activity, severity but also predicts treatment change. Further testing of the CDAI in patients undergoing treatment change is underway.

Abstract No: 100

Title: Patient participation in research, a Swedish model.

Authors: Nina Hemmestad Linderfeldt¹

Affiliations: ¹ Sweden

Text: Background: The Asthma and Allergy Association, the Heart and Lung Association, the Psoriasis Association and the Rheumatism Association in Sweden have together started a project to find models for patient participation and influence in all types of research.

Objectives: Patient participation in research may contribute to research. The collaboration between researchers and patients can improve the results of research.

Methods: The project will select and train so-called research partners and elected representatives in the associations. Our aim is that trained patients can function as a partner in various phases of the research process. The wishes and requirements of the individual researcher decide the role of the partner. We would like to develop the field of the present collaboration which often includes design and following up of research studies. Important is that they have experience of living with a chronic disease.

Results: The project is innovative when patient participation and consumer influence can be established in the medical research. Research partners can provide new perspectives from personnel experiences with the disease. Experiences, methods and structures are transferable to other medical research. Through co-operation with our research partners the researchers will obtain good opportunities to disseminate the results of their research in our associations and the society.

Conclusion: In the future, research can increasingly include patient participation. The requirements of applications for research grants will increasingly contain these elements of patient participation and influence. Disclosure of Interest: None declared.

Abstract No: 101

Title: Psoriasis social network web site www.psoriasispatient.com

Authors: Richard Thomas¹, Roman Bond²

Affiliations: ¹ skincareguide.com, ² Canada

Text:

Aims: This is a newly established web site which offers a platform for a social network for patients with Psoriasis.

Method: Patients, their families, dermatology nurses, other health professionals, and friends are invited to tell their story. Profiles relating to their psoriasis in terms of therapy and impact on their quality of life are invited. Problems that they have or issues that are significant to them can be discussed. Individuals with similar profiles can identify one another and talk to each other only or include the whole community.

Results: Results and learning's form the first 6 months of this web community will be presented.

Conclusions: Will be presented.

Abstract No: 102

Title: Evaluation of the quality of life in 200 Brazilian psoriatic patients.

Authors: Sueli Carneiro¹, Maria Augusta Japiassú¹, Bruna Darcier¹, Fernanda Torres¹, Mario Chaves², Gustavo Verardino², Marcia Ramos-e-Silva¹

Affiliations: ¹ Federal University of Rio de Janeiro, ² State University of Rio de Janeiro, Brazil

Text:

Aims: Evaluate the impact of psoriasis on QoL of patients examined in the Dermatology Clinic at Federal University of Rio de Janeiro, through PDI and DLQI scores and correlation of those with Psoriasis Area and Severity Index (PASI); and, also compare the results between these two questionnaires.

Methods: DLQI and PDI questionnaires were applied to 200 patients, older than 12 years old, in a cross-sectional study. The severity and extension of the disease by means of Psoriasis Area and Severity Index (PASI). Results were examined in light of those originated by DLQI and PDI. The score of DLQI varies from 0 to 30 and PDI from 0 to 45. The higher the scores, more affected is the quality of life.

Results: The mean scores of DLQI was 7.6 ± 6.64 ; PDI was 10.3 ± 8.6 and PASI was 11 ± 11.8 . We used the Spearman coefficient (rs) for statistical analysis. There is a strong association between: DLQI and PASI (rs = 0,502; p = 0.0001), PDI and PASI (rs = 0.488; p = 0.0001) and PDI and DLQI (rs = 0.796; p = 0.0001).

Conclusions: This study highlights the impact of psoriasis on quality of life, once demonstrated that the higher the score rate of PASI, the higher the score rate of DLQI and PDI, which shows that the higher impact on QoL happens on most severe cases. It is also found that these two questionnaires are correlated on their purpose, although DLQI is general and PDI specific for psoriasis.

Clinical Cases

Abstract No: 103

Title: Borreliosis mimicking lupus-like syndrome during infliximab treatment

Authors: Sonja Molin¹, Jörg C. Prinz¹

Affiliations: ¹ Ludwig-Maximilians-University, Germany

Text:

Aims: Autoimmune reactions like lupus-like syndrome (LLS) or drug-induced lupus erythematosus (DILE) may occur as severe adverse events in patients treated with TNF- α antagonists. Their pathogenesis is unknown.

Methods: We present the clinical case of a psoriasis patient treated with infliximab for severe plaque-type psoriasis who developed symptoms of severe LLS.

Results: A patient with severe chronic plaque psoriasis responded well to 5 infusions of infliximab, 5mg/kg. 7 weeks after the last infusion the patient developed LLS with seven ARA criteria for diagnosing systemic lupus erythematosus, which included high titre antinuclear antibodies, dsDNA antibodies, polyarthritis, hematologic abnormalities, and serositis with pleurisy. Despite systemic treatment with methotrexate and prednisolone the general condition of the patient worsened further. Subsequent serologic examinations for various bacterial or viral infections revealed high titre IgM and IgG antibodies against the spirochete *Borrelia burgdorferi* in enzyme-linked immunosorbent assay (ELISA) and Western blot analysis (IgM: OspC, IgG: 83/100, p43, DbpA) indicating active Lyme disease. A three weeks course of oral doxycycline, 200 mg once daily, rapidly and efficiently improved the symptoms of the LLS. Thus, LLS likely represented Lyme borreliosis.

Conclusions: This case suggests that pre-existent or newly acquired non septic intracellular bacterial or viral infections may escape immune surveillance during treatment with TNF- α antagonists and cause symptoms that induce or mimic autoimmune reactions. Accordingly, cases of LLS associated with TNF- α blockade should carefully be examined for infectious causes to distinguish autoimmunity from autoimmune mimics.

Abstract No: 104

Title: Development of viral warts in a patient receiving TNF- α inhibitor etanercept

Authors: Tiago Torres¹, Gloria Velho², Madalena Sanches², Manuela Selores²

Affiliations: ¹ CHP-HSA, ² Dermatology Department CHP-HSA, Portugal

Text:

The development, recurrence or exacerbation of some cutaneous viral infection, such as molluscum contagiosum, plantar warts and genital condylomata, in patients receiving treatment with TNF- α antagonists, have been described in the literature. We report the clinical case of the rapid and abruptly development of multiple viral warts in a patient, with no history of this cutaneous infection disease, who started etanercept for the treatment of plaque psoriasis. TNF- α has an important role in the immune response to infection: it is involved in the apoptosis of infected cells, preventing the viral replication and spread; its inhibition affects the production of cytokines and chemokines, the proliferation, activation and apoptosis of T lymphocytes and impairs the recognition of microorganisms by macrophages and dendritic cells. Probably, the TNF- α mediated antiviral defense is even further compromised by TNF- α inhibitors. Physicians should be aware of this potential infection complication in patients under treatment with TNF- α inhibitors and patients should be screened for this viral infection and treated properly before initiating these therapeutics.

Abstract No: 105

Title: Effectiveness of Treatment with Infliximab in a subject suffering from psoriasis and personality disorder borderline

Authors: Rossella Filippetti¹

Affiliations: ¹ UOC Dermatologico ospedale frascati Roma, Italy

Text:

Borderline personality disorder: characterized by excessive emotional experience and instability. Psoriasis: disease of the immune system. The inflammation is supported by the immune system: the production of several pro-inflammatory cytokines, the role played by tumor necrosis factor alpha. Cytokine produced by cells of the immune system, monocytes, macrophages, neoangiogenesis, Th0 differentiation of lymphocytes, Th1, abnormal proliferation of keratinocytes.

Clinical case: male patient of 18 years diagnosed with personality borderline in 13 years. At the age of 18 years, the impulsive behavior leads him to risk areas: gambling, reckless driving, substance abuse, promiscuous sex, and bulimia. At the same time are the first manifestations of psoriasis, is subjected to treatment with topical PUVA associated with poor results. Essential approach to treatment with psychotherapy, pharmacotherapy, based on the mood stabilizers, anxiolytic, antidepressant.

Results on the mental, but worsening of psoriasis: PASI index equal to 39.2. Recent acquisitions have highlighted the role of cytokines in psychiatric disorders, it is decided to treat psoriasis with infliximab, a drug biological anti-TNF alpha, is hoping to control psoriasis and the psychological disease. Administered at a dose of 2.5 mg / kg dose halved compared to European guidelines, 0,2,6 a-week observing complete clinical remission of psoriasis a follow-up of 12 weeks. No adverse event during psychiatric treatment, the patient showed an improvement in the socialization

Conclusions: Biological drugs, in particular, infliximab, used even in low doses, can change the attitude of cytokines and contribute to the improvement of psychiatric symptoms and psoriasis.

Abstract No: 106

Title: Psoriasis vulgaris and extracutaneous sarcoidosis: A case report

Authors: Mustafa Tunca¹, Ahmet Akar², Hakan Erbil², Ibrahim Ozmen², Erol Koc², Seyfettin Gumus³

Affiliations: ¹ Gulhane Military Medical Academy, ² GATA Dermatology, ³ GATA Chest and Tuberculosis, Turkey

Text:

About 25% of sarcoidosis patients may suffer from skin lesions of sarcoidosis during the course of their disease. But it is rarely associated with a distinct disease. One of the diseases infrequently associated with sarcoidosis is psoriasis. A 24-year-old male patient, who had a history of dyspnea, chest pain and asthenia for 4 year appealed to Department of Pulmonary Diseases. His chest radiography revealed bilateral hilar lymphadenopathy. With ultrasonographic examination hepatosplenomegaly and multipl lymphadenopathies on paraaortic, paraverebral and inguinal regions were detected. Extensive investigations including fiber-optic bronchoscopy, transbronchial needle aspiration biopsies of hilar lymph nodes and excisional biopsy from inguinal lymph node confirmed the pulmonary and reticuloendothelial involvement of sarcoidosis.

Elevated blood urea nitrogen and creatinine levels and renal biopsy indicated renal involvement. The patient was referred to our clinic because of the scaly, erythematous plaques on his trunk and extremities. The skin punch biopsy from one of the skin lesions demonstrated psoriasis histopathology. The co-existence of sarcoidosis with psoriasis in the same patient has been reported very rarely; and it is unclear whether this association is coincidental or significant.

Abstract No: 107

Title: Immunophenotype of the inflammatory infiltrate and epidermis cellular regeneration in the psoriatic papule

Authors: Vitaly Okhlopkov¹, Olga Pravdina²

Affiliations: ¹ The Omsk State Medical Academy, ² Russian Federation

Text:

Objectives: To determine the factors of inflammatory process keeping and epidermis cellular regeneration disturbances in the psoriatic papule. Materials and

Methods: Immunophenotype of the inflammatory infiltrate and cellular regeneration parameters have been investigated by immunohistochemical methods with serum exploiting (DAKO Ltd) in 22 patients with different stages of psoriasis. Expression of bcl-2 and p53 proteins has been studied to identify apoptosis. Expression of Ki-67 was studied to reveal epidermis cellular proliferation activity. Expression of CD3+, CD4+, CD8+ receptors to monomorphic determinant of HLA class II antibodies was determined in the mononuclear infiltrate.

Results: Ki-67 expression is increased and p53 level is decreased against the background of p53 expression increasing in case of inflammatory process progressing. Lymphocytes CD3+, CD4+, CD8+ compose immunophenotype of the inflammatory infiltrate. The quantity of CD3+, CD4+, CD8+ – lymphocytes is reliably decreased in a hospital stage of the disease correlating with Ki-67- and bcl-2 positive cells decreasing in epidermal layer and increasing of p53 expression in the above-mentioned positive cells.

Conclusion: The above mentioned cellular regeneration parameters and immunophenotype of the inflammatory infiltration can be used as a test-system for stage evaluation of psoriasis vulgaris, tendency of dermatosis development, and for evaluation of treatment efficacy. Key words cellular regeneration, immunophenotype of the inflammatory infiltrate, psoriasis

Abstract No: 108

Title: Reasonableness for systemic immunosuppressive drugs administration in treatment of patients with psoriasis

Authors: Vitaly Okhlopkov¹, Elena Zubareva¹

Affiliations: ¹ The Omsk State Medical Academy, Russian Federation

Text:

Objectives: To evaluate the traditional therapy efficacy in patients with psoriasis investigating the inflammatory infiltrate condition of a psoriatic papule.

Materials and Methods: 42 patients aged 20 to 55 years with psoriasis have been treated by traditional therapeutical methods (antihistamines, hyposensitization medicines, vitamins, ointments, and UVR). Clinical presentation has been evaluated according to the International Index (PASI). Biopsy from periphery of the psoriatic elements has been performed for all patients at the first day of admission to hospital and at the last hospitalization day. Monocytes / macrophages markers for CD68 and cell subpopulations for CD45RO memory-like T cells have been determined by the immunohistochemical methods.

Results: PASI index decreasing has been registered in patients at the end of therapy (p=0,003). In histological study of 26 biopsy tissue samplings of the patients against the background of conducting therapy the inflammatory infiltrate has had a focal nature mainly in the perivascular space. Gathering of the cellular elements has been revealed in 16 observations in the subcorneal epidermal parts with prevalence of the neutrophilic leukocytes characterized dermatosis progression stage. Tendency to decreasing of the amount of positive cells CD-68 and lymphocytes CD45RO has been registered in immunohistochemical study, but statistically significant difference has not been observed (p=0,075; p=0,091).

Conclusion: Pathologic process minimal activity signs in biopsy investigation at the end of hospitalization period indicate a low efficacy of the traditional therapeutic methods and need administration of the additional systemic immunosuppressive drugs. Key words psoriasis, traditional therapy, inflammatory infiltrate

Abstract No: 109

Title: Naphthalene preparation in the treatment of psoriasis and psoriatic arthritis.

Authors: Aida Pasic¹, Gordana Krnjevic Pezic², Goran Maricic², Aida Pasic¹, Kresimir Kostovic¹

Affiliations: ¹ University Hospital Center Zagreb, ² Naptalan Spec. Hospital for Med. Rehab., Croatia

Text:

Aim: Naphthalene is obtained from naphtha, a complex mixture of various compounds, mostly hydrocarbons. At Special Hospital for Medical Rehabilitation, Ivani Grad, Croatia brown naphthalene has been used for 15 years in the treatment of psoriasis. Experimental model studies revealed no genotoxicity. Aim was to determine clinical efficacy of naphthalene in patients with psoriasis vulgaris and psoriatic arthritis in a pilot study.

Patients and Methods: Twenty one patients (6 female and 15 male), mean age 46.5 (range 32-65) years, were included in the study. Upon obtaining an informed consent in writing from all study patients, naphthalene oil was applied over affected skin once daily. Naphthalene compresses along with naphthalene iontophoresis and sonophoresis were applied on the affected joints. The treatment lasted for three weeks. PASI score was recorded before, and then on days 7, 14 and 21 of treatment. Prior to naphthalene treatment, keratolytics were applied for scale removal.

Results: The mean PASI score was 20.9 at the beginning and 6.52 at the end of treatment. After 3-week treatment, significant reduction in the duration

of morning stiffness, edema and pain in the affected joints was recorded in the majority (80%) of study patients. The preparation tolerability was ranked high by both the patients and the physicians. No side effects were observed.

Conclusion: Naphthalene is a useful local agent for the treatment of mild and moderate forms of psoriasis and psoriatic arthritis.

Abstract No: 110

Title: Continuous antipsoriatic treatment with infliximab (IFX) throughout 8 years - a case report.

Authors: Antje Viehweg¹, Gottfried Wozel¹

Affiliations: ¹ University Hospital Carl Gustav Carus, Germany

Text:

For treatment of chronic inflammatory diseases like psoriasis various traditional drugs are available. Sometimes toxicities limit their long-term use (e.g. MTX, CsA). Therefore biologic agents, especially TNF- α -antagonists or p40 mAb may successfully be applied as second line treatment modalities. In terms of long-term treatment several clinical trials or reports are reflecting data over a maximal 3-year period (e.g. etanercept, adalimumab). Therefore registries collecting clinical data are important („real life“). In this context we would like to present a 51-year-old male patient suffering from severe plaque-type psoriasis in whom neither MTX, acitretin nor PUVA-therapy achieved satisfying improvement. Thereover therapy with IFX was started in 2002 (PASI 16.6). After an induction treatment phase (5mg/kg at week 0, 2 and 6) a maintenance treatment phase was administered every 8 weeks. Clearing of skin lesions was achieved after the 4th infusion. The beneficial response could be maintained until now (last visit 03/2009: PASI 0.8). Specific IFX-antibodies and ANAs were measured regularly. ANA titers were positive, whereas significant IFX-antibodies could not be detected. This case demonstrates that IFX may be applied as long-term treatment over years without complaints. Nevertheless, in every case close clinical and laboratory monitoring is required. All such cases should be published in order to get further extensive experience.

Abstract No: 111

Title: Childhood Generalized Pustular Psoriasis: A Report on Seven Cases

Authors: Ricardo Romiti¹, Sarah Oliveira¹, Luciana Maragno¹, Marcelo Arnone¹, Maria Denise Takahashi¹

Affiliations: ¹ HCFMUSP, Brazil

Text:

Severe cases such as generalized pustular and erythrodermic psoriasis are rare under the age of 12 years. Aim: We report a study on seven Brazilian children referred consecutively over a 20-year period to our psoriasis center in Brazil.

Methods: A retrospective review of the records of all patients diagnosed with generalized pustular psoriasis under the age of 12 was performed. Clinical manifestations were evaluated with respect to age, gender, duration of illness, and family history. Systemic abnormalities, triggering factors, and response to treatment were reported.

Results: The patients age at the diagnosis referral ranged from birth to 12 years, including four male and three female patients. Only one case had an affected family member. Four children showed psoriatic nail changes, and one a past history of psoriasis vulgaris. Pustular outbreaks tended to be associated with systemic symptoms, and two children demanded repeated intensive care hospitalization. Therapy: Systemic treatments included methotrexate, cyclosporine, acitretin, and biologics, as well as phototherapy. Generalized pustular psoriasis cases presented a tendency towards repeated bouts of new crops of lesions but generally responded to systemic treatment.

Over Conclusion: Our epidemiologic data support the contention that child-

hood generalized pustular psoriasis presents special characteristics which tend to be severe and occasionally life-threatening. A past history of psoriasis vulgaris as well as a positive family history were generally absent. Special attention to these children population concerning short and long time effects of therapeutic approaches and impact on quality of life is essential.

Health Economics and Health Policies

Abstract No: 112

Title: Methodological challenges in developing the first European S3 guidelines on the systemic treatment of psoriasis

Authors: Delano Pathirana¹, Alexander Nast¹, Berthold Rzany¹

Affiliations: ¹ Division of Evidence Based Medicine, Germany

Text:

Introduction: The development of evidence based guidelines is a demanding and time consuming process for all involved. We present our experience on a structured development process facilitated by the involvement of an international group of methodologists for the European evidence based guidelines on the systemic treatment of plaque psoriasis.

Methods: The setting of the guidelines base as well as the comprehensive process of the systematic literature search and evaluation was conducted by the group of methodologists in cooperation with the dEBM as coordinating centre. The results were provided to the entire guidelines group.

Results: In a first step after a systematic search for already existing guidelines three European guidelines were identified. After evaluation with the AGREE instrument all three were considered as of high quality and served as base for the new guidelines. Additionally a new literature search and evaluation was performed. Based on tables summarizing the evidence for each intervention, the therapeutic recommendations were formulated by the chapter authors. Subsequently these recommendations were discussed and finally consented by the entire guidelines group in a structured consensus process. This structured process allowed the conduction of only one consensus meeting and DELPHI procedure. After three subsequent internal as well as one external review, coordinated by the dEBM, the guidelines were presented to the EDF and EADV for approval in February 2009.

Conclusion: The development of European evidence based guidelines is time consuming, cost intensive and requires a coordinated structure, which can be best achieved by an experienced group of methodologists.

Abstract No: 113

Title: Employment is maintained and sick days decreased with etanercept in psoriasis/psoriatic arthritis patients

Authors: Robert Gniadecki¹, Tapani Tuomiranta², Sarolta Kárpáti³, Deborah Robertson⁴, Bruce Freundlich⁴, Charles Molta⁴, Robert Boggs⁴

Affiliations: ¹ Bispebjerg University Hospital, Denmark ² Hatanpää City Hospital, Finland ³ Semmelweis University, Hungary ⁴ Wyeth Research, United States

Text:

Aims: Psoriasis and psoriatic arthritis (PsA) likely influence employment/absenteeism. The PRESTA study (N=752) determined the effect of etanercept on work for patients with both moderate/severe psoriasis and PsA.

Methods: Eligibility included age >18 y, $\geq 10\%$ body surface area affected and ≥ 2 swollen/ ≥ 2 painful joints. Patients were randomized (1:1) to receive either ETN 50 mg BiW or 50 mg QW double-blind for 12 weeks, followed

by 50 mg QW open label for 12 weeks. At baseline, wk 12 and wk 24, all patients were asked whether they were working for pay and employed patients reported sick days taken.

Results: Employment increased significantly in the 50 mg BiW/QW group from 56.1% at baseline to 60.5% at wk 12 and 60.9% at wk 24 ($p \leq 0.003$), but not in the 50 mg QW group, in which employment rates were 59.5% at baseline and 58.0% and 59.6% at wks 12 and 24 ($p \geq 0.500$). No significant differences in employment were observed between groups at baseline or post baseline ($p \geq 0.511$). Monthly sick days decreased from 2.39 at baseline to 0.94 at wk 12 and 0.72 at wk 24 in the BiW/QW group and from 2.36 to 0.99 and 1.13 in the QW group. Improvement in sick days was significant in both groups ($p \leq 0.031$), without significant differences between the groups ($p \geq 0.268$).

Conclusions: In this study of patients with both psoriasis and PsA, employment was at least maintained in the etanercept BiW/QW and QW groups. Sick days were reduced by >50% with treatment for patients in both etanercept groups.

Abstract No: 114

Title: Statins in the treatment of psoriasis - friend or foe?

Authors: Andreas Colzman¹, Michael Sticherling²

Affiliations: ¹University Hospitals of Erlangen, Germany ²Department of Dermatology Erlangen, Gibraltar

Text:

Dyslipidemia is increased among psoriatic patients and both the chronic inflammatory activity associated with psoriasis as well as this metabolic dysbalance may represent major cardiovascular risk factors. Accordingly, an early and effective treatment of both disorders has been advocated. Statins are clinically well-established in the treatment of lipid disorders. In addition, positive effects on psoriasis may be anticipated as they were also shown to modulate various immunological parameters. However, the few available clinical reports for statins in the context of psoriasis only describe an exacerbation. Therefore in a pilot investigation patients with both psoriasis and dyslipidemia were treated with oral statins and disease activity and laboratory parameters monitored. In five patients with moderate to severe plaque psoriasis (mean PASI 11,8) and coincident hypercholesterolemia, a 12 week therapy with simvastatin was initiated with continuing local therapy with corticosteroids and calcipotriole. Clinical monitoring included PASI and total cholesterol, HDL-, LDL- and VLDL-cholesterol, C-reactive protein as well as hemogram, kidney- and liver functions. The hypercholesterolemia improved in all patients (mean total cholesterol before therapy 6,47 mmol/l, at the end of observation-period 4,54 mmol/l). The median PASI did not significantly change (mean-PASI before 12,6, after 10,9). Though beneficial effects on hypercholesterolemia were shown no apparent effects on psoriasis was found in this limited number of patients. However, in contrast to the literature no deterioration of the skin disease could be found. With regard to the potent, yet theoretical immunological effects of statins, a larger clinical study is necessary.

Abstract No: 115

Title: Quality of care and research profiles: Results of an International Psoriasis Council (IPC) exercise

Authors: Elizabeth Horn¹, Jonathan Barker², Richard Langley³, Alan Menter⁴, Alexa Kimball⁵

Affiliations: ¹International Psoriasis Council, United States ²St. John's Institute of Dermatology, United Kingdom ³Dalhousie University, Canada ⁴Baylor University Medical Center, ⁵Harvard Medical School, United States

Text:

Aims: Psoriasis, a chronic immune-mediated inflammatory disease, can be challenging to treat, and multiple factors can influence quality psoriasis care. The International Psoriasis Council initiated a project to create a profile for quality care.

Methods: A focus group of 10 psoriasis experts identified 70 criteria within 4 domains (resource/profile criteria, research criteria, clinical criteria, and teaching/speaking criteria). Forty-five dermatologists with a special interest in psoriasis were then asked what they regarded as important criteria for the delivery of quality care. Participants were asked to identify the 4 most important criteria in each domain and to rate all criteria on a Likert scale of 1-5. A second exercise was performed for confirmation.

Results: Thirty-three psoriasis experts (73% return rate) from 15 countries participated. Offering light therapy, teaching residents, participating in clinical research, following safety monitoring standards, having MD expertise, maintaining a minimum psoriasis volume, having a dedicated psoriasis clinic, and recording severity status both physical and psychological were considered the most important criteria (ranked as most important by at least two-thirds of participants and having a mean score of >4.0). The second exercise confirmed the results.

Conclusions: Criteria have been identified for the delivery of quality psoriasis care. This profile may be helpful to other stakeholders exploring excellence in psoriasis care.

Late Breaking Abstracts

Abstract No: 116

Title: Adalimumab efficacy for psoriatic nail disease in BELIEVE.

Authors: D Thaci¹, J-P Ortonne², K Kragballe³, J-H Saurat⁴, P Sproegel⁵, K Unnebrink⁶, H Kupper⁶ EH Sasso⁶

Affiliations: ¹Frankfurt, Germany; ²University of Nice, Nice, France; ³Århus Sygehus, Århus, Denmark; ⁴Hôpitaux Universitaires de Genève (HUG), Geneva, Switzerland; ⁵LEO Pharmaceutical Products Ltd. A/S, Ballerup, Denmark; ⁶Abbott GmbH & Co. KG, Ludwigshafen, Germany; ⁷Abbott Laboratories, Abbott Park, IL, USA.

Text:

Aims: To evaluate the effect of adalimumab therapy for psoriatic nail disease.

Methods: BELIEVE was a 16-week, randomized controlled trial of adalimumab in the treatment of patients with moderate to severe psoriasis who had failed, been intolerant of, or had contraindications to ≥ 2 systemic therapies. Patients received adalimumab (80 mg at Week 0; 40 mg eow, Weeks 1-15) and either topical vehicle or topical calcipotriol/betamethasone (daily for 4 weeks, then PRN; face, scalp, and nails excluded). Efficacy was assessed for skin by PASI and for nails by NAPSI.

Results: 730 patients enrolled, with mean baseline PASI of 19.5 and nail involvement in 63% of the patients.

Week-16 PASI 75 response rates were 64.8% for adalimumab+calcipotriol/betamethasone vs. 70.9% for adalimumab+vehicle ($p=0.086$). Mean (median) NAPSI scores for all patients combined were 25 (21) at baseline and 16 (11) at Week 16, with similar results for each treatment arm. For all patients subgrouped by Week-16 PASI response (<50; 50 to <75; 75 to <90; 90 to <100; 100), mean improvements in NAPSI from baseline to Week 16 were: 3.0, 7.1, 7.9, 12.3, and 14.2, respectively. Median improvements were: 2, 6, 4, 10, and 8.

Conclusions: Adalimumab therapy in BELIEVE resulted in substantial Week-16 improvement in psoriatic nail disease, with greatest improvements observed for patients with \geq PASI 90 responses.

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