

Literature Update Immunology

Period: 1-31.3.2011

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- **Effective continuous systemic therapy of severe plaque-type psoriasis is accompanied by amelioration of biomarkers of cardiovascular risk:** results of a prospective longitudinal observational study.
- **Regression of lymphoma after withdrawal of infliximab alone in an infliximab/methotrexate-treated RA patient.**

- **Assessment of long-term safety and efficacy of etanercept in a 5-year extension study in patients with rheumatoid arthritis.**
- **Skin Manifestations Induced by TNF-Alpha Inhibitors in Juvenile Idiopathic Arthritis.**
- **Systematic review and meta-analysis: Anti-tumor necrosis factor alpha therapy and cardiovascular events in rheumatoid arthritis.**
- **Influence of immunogenicity on the efficacy of long-term treatment with infliximab in rheumatoid arthritis.**
- **New onset polyarthritis during successful treatment of hidradenitis suppurativa with infliximab.**

IBD

Curr Gastroenterol Rep. 2010 Dec;12(6):471-8.

Mucosal healing in inflammatory bowel disease: where do we stand?

Ha C, Kornbluth A.

The definition of remission in Crohn's disease and ulcerative colitis has evolved to include mucosal healing as a measure of treatment efficacy. Randomized, controlled trials have demonstrated mucosal healing is attainable with the current arsenal of therapies available to treat inflammatory bowel disease. Mucosal healing has been shown to reduce the likelihood of clinical relapse, reduce the risk of future surgeries, and reduce hospitalizations. This review focuses on the latest studies addressing clinical outcomes of mucosal healing in the clinical trial and practice setting.

Transfus Apher Sci. 2010 Oct;43(2):227-9.

Leukocytapheresis in the treatment of inflammatory bowel disease: Current position and perspectives.

Vernia P, D'Ovidio V, Meo D.

Therapeutic apheresis, a novel approach for immunodisorders, has been used in the last decade for the treatment of ulcerative colitis with promising result, and represents an alternative to conventional pharmacological therapy. Selective apheresis is aimed at reducing the number of circulating lymphocytes, interfering with recruitment and activation of mucosal granulocytes and macrophages, reducing cytokine and chemokine production which are thought to contribute to induction and perpetuation of inflammation. The article briefly reports indications, treatment schedule and clinical results of leukocytapheresis in ulcerative colitis. Available data for the two selective adsorption devices so far approved for clinical use (granulocyte-monocyte apheresis- Adacolumn- and leukocytapheresis-Cellsorba) are partially conflicting, and the number of controlled studies too small to draw definitive conclusions. Nonetheless apheresis definitely appears to be an effective non-conventional tool for the treatment of steroid refractory and steroid dependent UC patients with moderately active disease. The excellent safety profile of the procedure makes this approach attractive, both in adult and in pediatric patients, more so in those refractory to conventional drug therapy, who are presently treated with immunosuppressive and biological therapies.

Inflamm Bowel Dis. 2011 Apr;17(4):947-53. doi: 10.1002/ibd.21439. Epub 2010 Sep 21.

Endoscopic monitoring of infliximab therapy in Crohn's disease.

Björkstén CG, Nieminen U, Turunen U, Arkkila PE, Sipponen T, Färkkilä MA.

BACKGROUND: So far, infliximab (IFX) therapy for the treatment of Crohn's disease (CD) has generally been guided by clinical symptoms. Data on treatment response as ascertained by endoscopy in IFX therapy are scarce. The aims of this study were to measure the endoscopic response rate during IFX induction and maintenance therapy in luminal CD, and also evaluate the role of endoscopy in monitoring IFX therapy.

METHODS: Data obtained from 71 patients with active luminal CD and treated with IFX were analyzed retrospectively. The endoscopy findings were scored according to mucosal activity as: 0 (remission), 1-2 (mild), 3-4 (moderate), and 5-6 (severe). A positive endoscopic response was determined by a decrease in score of at least two points and mucosal healing was assigned a score of between 0-2.

RESULTS: At baseline all patients presented with moderate or severe luminal inflammation. A positive endoscopic response occurred in 73% of patients at 3 months and when IFX was continued, the endoscopic response was maintained in 77% of these patients at 12 months. Mucosal healing at first follow-up endoscopy was documented in 45% of patients and was highly predictive for its persistence at 12 months, maintained in 90% of patients, when IFX was continued.

CONCLUSIONS: Endoscopy at 3 months from the start of IFX therapy helps to predict responders to IFX for maintenance therapy in active luminal CD. (Inflamm Bowel Dis 2011).

Inflamm Bowel Dis. 2011 Apr;17(4):954-62. doi: 10.1002/ibd.21415.

Immediate and long-term outcomes of corticosteroid therapy in pediatric crohn's disease patients.

Krupoves A, Mack DR, Seidman EG, Deslandres C, Bucionis V, Amre DK.

Literature Update Immunology – Period Fehler! Verweisquelle konnte nicht gefunden werden.

BACKGROUND: Although a mainstay of treatment of moderate to severe Crohn's disease (CD), corticosteroids use presents significant challenges because of large interindividual variability in response. Corticosteroid-dependence is of particular concern in children, where high rates have been reported. We examined the burden of corticosteroid-resistance and dependence in a well-characterized cohort of pediatric CD patients and investigated potential predictors of response.

METHODS: Children diagnosed with CD (<18 years), were recruited from two Canadian pediatric gastroenterology clinics. Immediate and long-term responses to corticosteroid therapy were retrospectively ascertained. Response rates (resistance and dependence) were estimated and potential predictors assessed using logistic regression analysis.

RESULTS: Of the 645 CD patients, 364 (56.2%) received corticosteroids. The frequency of corticosteroid-resistance was (8.0%) (95% confidence interval [CI]: 5.0%-11%) and 40.9% (95% CI: 39.0%-46.0%) became dependent. In univariate analysis female gender (odds ratio [OR] = 2.49, 95% CI: 1.1-5.5, P = 0.025), disease severity (OR = 2.43, 95% CI: 1.10-5.38, P = 0.029), and complicated disease (OR = 2.75, 95% CI: 1.18-6.41, P = 0.019) were associated with resistance. In multivariate analysis lower age at diagnosis (OR = 1.34, 95% CI: 1.03-3.01, P = 0.040), coexisting upper digestive tract involvement (OR = 1.35, 95% CI: 1.06-3.07, P = 0.031), and concomitant immunomodulator use (OR = 0.35, 95% CI: 0.16-0.75, P = 0.007) were significantly associated with steroid dependency.

CONCLUSIONS: Our results demonstrate that steroid dependency is a frequent complication in children with CD. Children with an earlier age at diagnosis and coexisting upper digestive tract involvement could be potentially targeted for steroid-sparing therapy. (Inflamm Bowel Dis 2011).

Inflamm Bowel Dis. 2011 Apr;17(4):1008-14. doi: 10.1002/ibd.21445. Epub 2010 Sep 1.

Physician assessment of ulcerative colitis activity correlates poorly with endoscopic disease activity.

Regueiro M, Rodemann J, Kip KE, Saul M, Swoger J, Baidoo L, Schwartz M, Barrie A, Binion D.

BACKGROUND: Subjective physician assessment is the cornerstone of routine ulcerative colitis (UC) management. Endoscopic and histologic assessment of UC provides objective measures of inflammatory disease activity. The level of agreement between physician impression of UC activity and endoscopic disease activity has not been evaluated. The aim was to assess the level of agreement between physician's clinical impression of UC disease activity and endoscopic and histologic findings of inflammation.

METHODS: Using the Medical Archival Retrieval System at the University of Pittsburgh Medical Center, we reviewed clinical information on all UC patients between 1995 and 2008 who had clinic visits recorded prior to colonoscopy. Clinical UC disease activity was defined by the physician's clinical impression and the endoscopic and histologic activity by colonoscopy with biopsy. The level of agreement between colonoscopy assessment of UC with histologic and clinical assessment was determined by sensitivity, specificity, positive and negative predictive values, and the kappa coefficient.

RESULTS: There were 369 UC patients who had a clinic visit proximate to a colonoscopy. The mean age of patients was 46 ± 16 years (50% female). The performance of clinical impression in recognizing disease activity, as determined by endoscopy, was relatively poor: sensitivity = 56.0%, predictive value negative = 56.8%, kappa coefficient = 0.35. In contrast, the performance of histological evaluation in recognizing disease activity was markedly better: sensitivity = 93.5%, predictive value negative = 89.1%, kappa coefficient = 0.70.

CONCLUSIONS: The physician's clinical impression of UC activity shows poor agreement with endoscopy and histology, with over one-third of patients with chronic inflammation underrecognized by clinical impression. The consequences of underestimated UC activity by clinical assessment may include undertreatment of active disease and uncontrolled chronic inflammation. (Inflamm Bowel Dis 2011;).

Inflamm Bowel Dis. 2011 Apr;17(4):1021-9. doi: 10.1002/ibd.21426.

Using metabolomic analysis to understand inflammatory bowel diseases.

Lin HM, Helsby NA, Rowan DD, Ferguson LR.

Crohn's disease (CD) and ulcerative colitis (UC) are inflammatory bowel diseases (IBD) attributed to a dysregulated immune response towards intestinal microbiota. Although various susceptibility genes have been identified for CD and UC, the exact disease etiology is unclear and complicated by the influence of environmental factors. Metabolomic analysis enables high sample throughput measurements of multiple metabolites in biological samples. The use of metabolomic analysis in medical sciences has revealed

metabolite perturbations associated with diseases. This article provides a summary of the current understanding of IBD, and describes potential applications and previous metabolomic analysis in IBD research to understand IBD pathogenesis and improve IBD therapy. *Inflamm Bowel Dis* 2011.

Postgrad Med J. 2011 Mar;87(1025):215-22. Epub 2011 Jan 17.

Acute severe ulcerative colitis: timing is everything.

Gulliford SR, Limdi JK.

The idiopathic inflammatory bowel diseases comprise mainly two types of intestinal disorder, Crohn disease and ulcerative colitis. The clinical course is marked by exacerbations and remissions that occur spontaneously in response to treatment or intercurrent illness. The disease affects approximately 240 000 patients in the UK. Acute severe ulcerative colitis is a medical emergency; prompt effective treatment at the point of admission can avoid significant morbidity and be potentially life-saving. Although such patients need specialist management, it is imperative that emergency care physicians are aware of the important principles of management of this condition to achieve successful outcomes. Corticosteroids remain the cornerstone of initial therapy, but a third of patients will fail to respond, and further management involves critical and timely decisions on whether to use rescue therapy in the form of ciclosporin or infliximab without compromising the health or safety of the patient or to offer timely surgery. The evidence base for the choices for optimal management of this condition is presented.

Am J Gastroenterol. 2011 Mar 8. [Epub ahead of print]

Successive treatment with cyclosporine and infliximab in steroid-refractory ulcerative colitis.

Leblanc S, Allez M, Seksik P, Flourié B, Peeters H, Dupas JL, Bouguen G, Peyrin-Biroulet L, Duclos B, Bourreille A, Dewit O, Bouhnik Y, Michetti P, Chaussade S, Saussure P, Mary JY, Colombel JF, Lémann M.

OBJECTIVES: Rescue therapy with either cyclosporine (CYS) or infliximab (IFX) is an effective option in patients with intravenous steroid-refractory attacks of ulcerative colitis (UC). In patients who fail, colectomy is usually recommended, but a second-line rescue therapy with IFX or CYS is an alternative. The aims of this study were to investigate the efficacy and tolerance of IFX and CYS as a second-line rescue therapy in steroid-refractory UC or indeterminate colitis (IC) unsuccessfully treated with CYS or IFX.

METHODS: This was a retrospective survey of patients seen during the period 2000-2008 in the GETAID centers. Inclusion criteria included a delay of <1 month between CYS withdrawal (when used first) and IFX, or a delay of <2 months between IFX (when used first) and CYS, and a follow-up of at least 3 months after inclusion. Time-to-colectomy, clinical response, and occurrence of serious adverse events were analyzed.

RESULTS: A total of 86 patients (median age 34 years; 49 males; 71 UC and 15 IC) were successively treated with CYS and IFX. The median (\pm s.e.) follow-up time was 22.6 (7.0) months. During the study period, 49 patients failed to respond to the second-line rescue therapy and underwent a colectomy. The probability of colectomy-free survival (\pm s.e.) was 61.3 \pm 5.3% at 3 months and 41.3 \pm 5.6 % at 12 months. A case of fatal pulmonary embolism occurred at 1 day after surgery in a 45-year-old man. Also, nine infectious complications were observed during the second-line rescue therapy.

CONCLUSIONS: In patients with intravenous steroid-refractory UC and who fail to respond to CYS or IFX, a second-line rescue therapy may be effective in carefully selected patients, avoiding colectomy within 2 months in two-thirds of them. The risk/benefit ratio should still be considered individually. *Am J Gastroenterol* advance online publication, 8 March 2011; doi:10.1038/ajg.2011.62.

Aliment Pharmacol Ther. 2011 Apr;33(8):857-69. doi: 10.1111/j.1365-2036.2011.04598.x. Epub 2011 Feb 15.

Review article: infliximab for Crohn's disease treatment - shifting therapeutic strategies after 10 years of clinical experience.

Danese S, Colombel JF, Reinisch W, Rutgeerts PJ.

Aliment Pharmacol Ther 2011; 33: 857-869 **SUMMARY:** Background Crohn's disease is a progressive condition, with most patients developing a penetrating or stricturing complication over time. A decade ago, treatment goals consisted of immediate symptomatic control. The introduction of anti-tumour necrosis factor (anti-TNF) therapies, however, has changed the way patients with Crohn's disease are

treated. Over 10 years of clinical data and experience have demonstrated these therapies to be highly effective in Crohn's disease. **Aim** To provide clinicians guidance on optimising treatment with anti-TNF therapies in Crohn's disease by introducing an evidence- and personal opinion-based treatment algorithm using infliximab initial anti-TNF therapy. **Methods** Scientific literature was reviewed using MEDLINE to evaluate data on clinical trials with infliximab in luminal and fistulising Crohn's disease. **Results** The data from several landmark infliximab trials have changed clinical practice and led to a readjustment of treatment goals in Crohn's disease, allowing patients to achieve more than just symptomatic relief including sustained steroid-free remission. Infliximab induces complete mucosal healing and reduces the rates of hospitalisation and surgery. Based on disease-related risk factors, a treatment algorithm for infliximab is delineated in favour of a rapid step-up approach in patients at high risk for a disabling course of disease. **Conclusion** Adopting the suggested treatment algorithm for infliximab into clinical routine is aimed to optimise outcomes for patients with Crohn's disease.

Aliment Pharmacol Ther. 2011 Apr;33(8):870-9. doi: 10.1111/j.1365-2036.2011.04599.x. Epub 2011 Feb 15.

Review article: remission rates achievable by current therapies for inflammatory bowel disease.
Peyrin-Biroulet L, Lémann M.

Aliment Pharmacol Ther 2011; 33: 870-879 **SUMMARY:** **Background** New medical therapies have improved outlook in inflammatory bowel disease but published impact on surgical rates has been modest suggesting that many patients are still not attaining remission. **Aim** To review remission rates with current medical treatments for inflammatory bowel disease. **Methods** We searched MEDLINE (source PUBMED, 1966 to January, 2011). **Results** Induction and maintenance of remission was observed in 20% (range, 9-29.5%) and 53% (range, 36.8-59.6%) of ulcerative colitis (UC) patients treated with oral 5-ASA derivatives. Induction of remission was noted in 52% (range, 48-58%) of Crohn's disease (CD) patients and 54% of UC patients treated with steroids in population-based cohorts. Maintenance of remission was reported in 71% (range, 56-95%) of CD patients on azathioprine over a 6-month to 2-year period and in 60% (range, 41.7-82.4%) in UC at 1 year or longer. Induction and maintenance of remission was noted in 39% (range, 19.3-66.7%) and 70% (range, 39-90%) of CD patients on methotrexate over a 40-week period. Induction of remission was reported in 32% (range, 25-48%), 26% (range, 18-36%) and 20% (range, 19-23%) of CD patients on infliximab, adalimumab or certolizumab pegol, respectively. The corresponding figures were 45% (range, 39-59%), 43% (range, 40-47%) and 47.9% at weeks 20-30 among initial responders. Induction of remission was observed in 33% (range, 27.5-38.8%) and 18.5% of UC patients on infliximab or adalimumab, respectively. Maintenance of remission was noted in 33% (range, 25.6-36.9%) of UC patients on infliximab at week 30. Approximately one-fifth of CD and UC patients treated with biologicals require intestinal resection after 2-5 years in referral-centre studies. **Conclusion** In the era of biologics, the proportion of patients with inflammatory bowel disease not entering remission remains high.

J Med Case Reports. 2011 Mar 19;5(1):109. [Epub ahead of print]

Adalimumab - an effective and promising treatment for patients with fistulizing Crohn's disease: a case series.

Kouklakis G, Efremidou EI, Zegos P, Liratzopoulos N, Souftas VD, Gatopoulou A, Simopoulos K, Manolas KJ.

INTRODUCTION: Crohn's disease is a chronic inflammatory bowel disease of unknown etiology which may affect any part of the bowel. Fistulas are a common and often serious complication of Crohn's disease. The treatment for fistulizing Crohn's disease can be medical, surgical or a combination of the two. Recently, adalimumab, a fully human anti-tumor necrosis factor monoclonal antibody, has been suggested as a safe and effective treatment for the induction and maintenance of remission in adult patients with moderate to severe Crohn's disease, who are refractory to conventional therapy or intolerant to infliximab. However, large studies focusing on evaluating the efficacy of adalimumab in fistulizing Crohn's disease have not yet been published.

CASE PRESENTATION: We report the cases of three patients, of European Caucasian ethnicity and Greek nationality, with active luminal and fistulizing Crohn's disease. All of the cases were treated successfully with adalimumab. Patient 1 (a 44-year-old man) and patient 2 (an 18-year-old woman) developed early post-surgical enterocutaneous fistulas, while patient 3 (a 20-year-old woman) had perianal fistulizing Crohn's disease. Adalimumab treatment (160mg subcutaneously at week zero, 80mg at week two, and 40mg every other week) was used for three different indications: (1) after the failure of

other conservative medical treatments for Crohn's disease (patient 1); (2) as a monotherapy in treating a naive patient (patient 2); (3) after an intolerance to infliximab (patient 3). A remission of the active luminal and fistulizing disease was achieved soon after the initiation of adalimumab and sustained thereafter with maintenance doses. No further surgical intervention was required and no adverse effects were observed in any of the cases.

CONCLUSIONS: Fistulizing Crohn's disease remains a challenge in clinical practice. Adalimumab seems to be an effective, well-tolerated and safe treatment option for the induction and maintenance of remission in patients with moderate to severe peri-anal fistulizing Crohn's disease. Furthermore, adalimumab seems to be a promising treatment option for patients with moderate to severe fistulizing Crohn's disease with enterocutaneous fistulas. However, this clinical observation needs to be investigated in further clinical trials.

Scand J Gastroenterol. 2011 Apr;46(4):420-7. Epub 2010 Nov 30.

Blood chemistry markers for evaluation of inflammatory activity in Crohn's disease during infliximab therapy.

Lönnkvist MH, Theodorsson E, Holst M, Ljung T, Hellström PM.

Abstract Objective. There is a discrepancy between clinical activity and biomarkers in inflammatory bowel disease. The Harvey-Bradshaw index (HBI) is steadfast to evaluate disease activity. A set of biological markers (high sensitive C-reactive protein [hs-CRP], calprotectin, total nitrite, soluble urokinase Plasminogen Activator Receptor [suPAR], ghrelin and endothelin) are investigated to study inflammatory activity and correlation with HBI during infliximab therapy. **Material and methods.** Patients with Crohn's disease (n = 22) were assessed and blood samples drawn before and 1 week after infliximab infusion (5 mg/kg) and repeated after 6 months, and compared to healthy volunteers. Hs-CRP, calprotectin, suPAR, ghrelin and endothelin were analyzed with immunoassays, and total nitrite with Griess-reaction. Results were analyzed with Wilcoxon matched-pairs test, Mann-Whitney test and Spearman correlations. **Results.** After the first infusion visit, HBI and calprotectin values decreased while nitrite increased (p < 0.05). At the 6-month visit, pre-infusion index and biomarkers had returned to baseline levels. Post-infusion, again the values of HBI, hs-CRP and calprotectin decreased (p < 0.05). The suPAR levels did not change between pre- and post-infusion periods at either visit. Calprotectin, nitrite and suPAR differed from healthy controls throughout the study (p < 0.05). Endothelin decreased with each treatment but was, like ghrelin, not different from controls. We found HBI to correlate with hs-CRP (Spearman r = 0.32, p < 0.05), but calprotectin did not, neither did nitrate nor suPAR. **Conclusions.** Although infliximab ameliorates Crohn's disease symptoms, inflammatory markers are not persistently normalized, indicating a chronic inflammatory condition that may require continued infliximab therapy.

Safety

J Rheumatol. 2011 Mar;38(3):581-3.

Acquired erythrocytosis upon treatment with infliximab for ankylosing spondylitis.

Antonelli M, Bupathi M, Janakiram M, Hergenroeder P, Khan MA.

No abstract available.

J Dermatolog Treat. 2011 Jan 22. [Epub ahead of print]

Flare of pustular psoriasis after initiating ustekinumab therapy.

Wenk KS, Claros JM, Ehrlich A.

Abstract Anti-tumor necrosis factor- α therapy has been paradoxically associated with the new development or worsening of existing psoriasis. We describe the case of a patient who experienced a flare of pustular psoriasis after initiating anti-interleukin-12/23 therapy, which subsequently improved following discontinuation of the drug.

J Am Acad Dermatol. 2011 Feb 9. [Epub ahead of print]

The risk of infection and malignancy with tumor necrosis factor antagonists in adults with psoriatic disease: A systematic review and meta-analysis of randomized controlled trials.

Dommasch ED, Abuabara K, Shin DB, Nguyen J, Troxel AB, Gelfand JM.

BACKGROUND: There is a need to better understand the safety of tumor necrosis factor (TNF) inhibitors in patients with psoriatic disease in whom TNF inhibitors are frequently used as monotherapy.

OBJECTIVE: We sought to examine the risks of infection and malignancy with the use of TNF antagonists in adult patients with psoriatic disease.

METHODS: We conducted a systematic search for trials of TNF antagonists for adults with plaque psoriasis and psoriatic arthritis. We included randomized, placebo-controlled trials of etanercept, infliximab, adalimumab, golimumab, and certolizumab for the treatment of plaque psoriasis and psoriatic arthritis. Twenty of 820 identified studies with a total of 6810 patients were included. Results were calculated using fixed effects models and reported as pooled odds ratios.

RESULTS: Odds ratios for overall infection and serious infection over a mean of 17.8 weeks were 1.18 (95% confidence interval [CI] 1.05-1.33) and 0.70 (95% CI 0.40-1.21), respectively. When adjusting for patient-years, the incidence rate ratio for overall infection was 1.01 (95% CI 0.92-1.11). The odds ratio for malignancy was 1.48 (95% CI 0.71-3.09) and 1.26 (95% CI 0.39-4.15) when nonmelanoma skin cancer was excluded.

LIMITATIONS: Short duration of follow-up and rarity of malignancies and serious infections are limitations.

CONCLUSIONS: There is a small increased risk of overall infection with the short-term use of TNF antagonists for psoriasis that may be attributable to differences in follow-up time between treatment and placebo groups. There was no evidence of an increased risk of serious infection and a statistically significant increased risk in cancer was not observed with short-term use of TNF inhibitors.

Br J Dermatol. 2011 Feb 17. doi: 10.1111/j.1365-2133.2011.10257.x. [Epub ahead of print]

Cardiovascular safety of ustekinumab in patients with moderate-to-severe psoriasis: Results of integrated analyses of data from phase II and III clinical studies.

Reich K, Langley RG, Lebwohl M, Szapary P, Guzzo C, Yeilding N, Li S, Hsu MC, Griffiths CE.

Background: Psoriasis patients are believed to be at an increased risk of cardiovascular (CV) morbidity, and the effect of biological agents on CV safety is not fully understood. **Objective:** To evaluate the effect of ustekinumab on CV events using detailed analyses of pooled data from the phase II/III clinical studies of its use in moderate-to-severe psoriasis. **Methods:** The incidence of major adverse CV events (MACE; myocardial infarction [MI], stroke, or CV death) is reported. Meta-analyses using risk difference and odds ratio (OR) estimates are presented based on data collected during the placebo-controlled period of ustekinumab trials. The cumulative number of events and rates of MIs and strokes over time were compared with that expected in the psoriasis and/or general populations. **Results:** During the placebo-controlled period (12/20 weeks), five MACE were reported in 1582 ustekinumab-treated patients (0.3%; 95% Confidence Interval [CI]: 0.1, 0.7%) compared with no events in 732 placebo-treated patients (0.0%; 95% CI: 0.0, 0.5%). MACE rates were stable over time during both the controlled and uncontrolled study periods, with 19 of 3117 ustekinumab-treated patients (0.1%) experiencing 21 events for a combined event rate per hundred patient-years of follow-up of 0.44 (95% CI: 0.27, 0.67) through up to 3 years. Standardized incidence ratios for comparison of ustekinumab clinical data with external data sources ranged from 0.34 to 0.52, suggesting no increased risk of MI or stroke in ustekinumab-treated patients compared with the general United States and psoriasis populations. **Conclusion:** The totality of available clinical data suggests neither a detrimental nor a beneficial effect of ustekinumab on serious CV events. Additional data are needed to define the net effect of ustekinumab on CV events.

J Rheumatol. 2011 Mar;38(3):577-9.

Hypersensitive joint reaction after etanercept treatment in a patient with juvenile rheumatoid arthritis.

Guo MM, Yang KD, Yu HR, Kuo HC.

No abstract available.

J Rheumatol. 2011 Mar;38(3):579-80.

Vasculitis, vitiligo, thyroiditis, and altered hormone levels after anti-tumor necrosis factor therapy.
Lahita RG, Vernace MA.

No abstract available.

Ann Rheum Dis. 2011 Feb 28. [Epub ahead of print]

Anti-TNF therapies and pregnancy: outcome of 130 pregnancies in the British Society for Rheumatology Biologics Register.

Verstappen SM, King Y, Watson KD, Symmons DP, Hyrich KL; ; BSRBR Control Centre Consortium, BSR Biologics Register.

OBJECTIVE: The British Society for Rheumatology Biologics Register (BSRBR) has collected data on adverse events including pregnancies in patients with rheumatoid arthritis treated with anti-tumour necrosis factor (anti-TNF) therapy. The purpose of this report is to summarise the pregnancy outcomes in women treated with anti-TNF in the BSRBR.

METHODS: Patients were categorised according to anti-TNF exposure as follows: (1) exposure to anti-TNF and to methotrexate (MTX) and/or leflunomide (LEF) at conception (n=21 pregnancies); (2) exposure to anti-TNF at conception (n=50); (3) exposure to anti-TNF prior to conception (n=59); (4) no exposure to anti-TNF (control group; n=10).

RESULTS: Eighty-eight live births in a total of 130 pregnancies were reported in patients who received anti-TNF before or during pregnancy. The rate of spontaneous abortion was highest among patients exposed to anti-TNF at the time of conception (with MTX/LEF 33% and without MTX/LEF 24%). This compared with 17% spontaneous abortions in those with prior exposure to anti-TNF and 10% spontaneous abortions in the control group. Ten terminations were performed.

CONCLUSION: Although the results to date have been promising, no firm conclusions can be drawn about the safety of anti-TNF during pregnancy and, without further evidence, guidelines which suggest these drugs should be avoided at the time of conception cannot yet be changed.

J Gastroenterol Hepatol. 2011 Mar;26(3):610. doi: 10.1111/j.1440-1746.2011.06622.x.

Gastrointestinal: Herpes simplex virus-associated erythema multiforme (HAEM) during infliximab treatment for ulcerative colitis.

Sciaudone G, Pellino G, Guadagni I, Selvaggi F.

No abstract available.

Arthritis Rheum. 2011 Mar;63(3):622-32. doi: 10.1002/art.30194.

Evaluation of the safety of rituximab in combination with a tumor necrosis factor inhibitor and methotrexate in patients with active rheumatoid arthritis: results from a randomized controlled trial.

Greenwald MW, Shergy WJ, Kaine JL, Sweetser MT, Gilder K, Linnik MD.

OBJECTIVE: To assess the safety of rituximab in combination with a tumor necrosis factor (TNF) inhibitor and methotrexate (MTX) in patients with rheumatoid arthritis (RA).

METHODS: Adult patients with active RA (≥ 5 swollen and ≥ 5 tender joints) receiving a stable dose of MTX (10-25 mg/week) and stable dose of TNF inhibitor (etanercept or adalimumab) for ≥ 12 weeks were randomized 2:1 to receive one course of rituximab or placebo, given intravenously at a dose of 2×500 mg. The primary end point was the proportion of patients developing ≥ 1 serious infection through week 24.

RESULTS: Fifty-one patients were treated with either rituximab or placebo in combination with background MTX and a TNF inhibitor. Baseline characteristics were generally balanced between groups, except for corticosteroid usage (36% in the rituximab arm versus 17% in the placebo arm). A serious infection (pneumonia) was observed in 1 patient (3%) in the rituximab group after 14.4 patient-years of exposure (6.95 events per 100 patient-years, 95% confidence interval 0.98-49.35), compared with none in the placebo group at week 24. Infections were reported in 18 patients (55%) and 11 patients (61%) in the rituximab and placebo groups, respectively. Grade 3 infections were reported in 3 patients (9%) receiving rituximab and in none of the patients receiving placebo. No grade 4 infections were observed, nor were there any opportunistic, fungal, or tuberculosis infections. Serious adverse events (SAEs) were

reported in 2 rituximab-treated patients (pneumonia and coronary artery occlusion), whereas there were no SAEs reported in placebo-treated patients. At week 24, the percentage of patients achieving an American College of Rheumatology 20% (ACR20) improvement response was 30% in the rituximab group compared with 17% in the placebo group, and ACR50 responses were achieved by 12% and 6% of patients, respectively.

CONCLUSION: The preliminary safety profile of rituximab in combination with a TNF inhibitor and MTX was consistent with the safety profile of rituximab in combination with MTX in other RA trials without a TNF inhibitor, with no new safety signals observed. SAEs were numerically more frequent in the rituximab group, and there was no clear evidence of an efficacy advantage in patients receiving rituximab in combination with a TNF inhibitor and MTX.

Journal of the European Academy of Dermatology and Venereology Volume 25 May 2011, Pages: 12–18
Methotrexate in psoriasis: a systematic review of treatment modalities, incidence, risk factors and monitoring of liver toxicity

H Montaudié, E Sbidian, C Paul, A Maza, A Gallini, S Aractingi, F Aubin, H Bachelez, B Cribier, P Joly, D Jullien, M Le Maître, L Misery, M-A Richard and J-P Ortonne

Background/Aim To define practical use and to specify the ideal method for monitoring the liver toxicity of MTX in the management of psoriasis.

Objective To systematically review the literature regarding treatment modalities with methotrexate (MTX) in psoriasis, risk of MTX-mediated liver fibrosis and monitoring of hepatic toxicity.

Methods A systematic literature search was carried out in Medline, Embase and Cochrane Library databases from 1980 to 2010 searching for randomized controlled trials and observational studies on methods of administering MTX in psoriasis and risk factors and assessment of liver toxicity. We limited the literature search to articles on human subjects over 19 years of age, articles in English or French on psoriasis and articles including psoriatic arthritis and original data.

Results Among 949 references identified, 23 published studies were included. There were no studies focusing directly on the question of MTX treatment modalities. Treatment outcome appears to be dose dependent. A single study in rheumatoid arthritis showed the slightly superior efficacy of subcutaneous administration vs. oral dosing with a similar safety profile. Combination with folic acid may decrease the efficacy of MTX while improving tolerability. The extreme variability of the incidence of hepatic fibrosis in the literature does not allow the risk of hepatic fibrosis to be quantified. Type 2 diabetes and obesity, were associated with a significant increased risk of liver fibrosis. Hepatitis B and C and alcohol consumption were associated with a modest and non-significant increased risk of liver fibrosis. Procollagen III for detection of hepatic fibrosis dosing was the most extensively validated method to monitor liver fibrosis showing a sensitivity of 77.3% and a specificity of 91.5%. The Positive Predictive Value and Negative Predictive Value fluctuated depending on the prevalence of hepatic fibrosis. The sensitivities of the FibroTest and the fibroscan were of 83 and 50%, respectively, with specific features amounting to 61 and 88% respectively.

Conclusions Based on expert experience, the starting dose of MTX is between 5 and 10 mg/week for the first week. Fast dose escalation is recommended in order to obtain a therapeutic target dose of 15–25 mg/week. The maximum recommended dose is 25 mg/week. A folic acid supplement is necessary. The initiation of treatment by oral administration is preferred. In cases where inadequate response is obtained or in the event of poor gastrointestinal tolerance, subcutaneous dosing can be proposed at the same dose. Published data do not confirm the incidence of hepatic fibrosis. Type 2 diabetes and obesity appear to be significant risk factors in fibrosis. A combination of FibroTests and fibroscans together with measurement of the type III serum procollagen aminopeptide seem to be ideal method for monitoring liver toxicity.

Journal of the European Academy of Dermatology and Venereology Volume 25 May 2011, Pages: 19–27
Oral cyclosporin in psoriasis: a systematic review on treatment modalities, risk of kidney toxicity and evidence for use in non-plaque psoriasis

A Maza, H Montaudié, E Sbidian, A Gallini, S Aractingi, F Aubin, H Bachelez, B Cribier, P Joly, D Jullien, M Le Maître, L Misery, M-A Richard, J-P Ortonne and C Paul

Background Although cyclosporin (CyA) has been in use in psoriasis for more than 20 years, there is still controversy regarding treatment strategy, monitoring of kidney function and utility in non-plaque psoriasis.

Objectives To prepare for evidence-based recommendations concerning the practical use of CyA in psoriasis, we performed a systematic review to better define treatment strategy, risk of kidney toxicity and evidence for use in non-plaque psoriasis.

Methods A systematic search was performed on PubMed, Cochrane and Embase databases, using the key-words 'psoriasis', 'CyA', 'nephrotoxicity' during the period from 1980 to June 2010.

Results The initial literature search identified 428 articles. The final selection included 16 randomized controlled trials (RCT) for treatment strategy, 25 articles (histological studies and RCT) for risk of kidney toxicity and 10 articles (RCT, prospective studies and case series) for use in non-plaque psoriasis. Higher doses of CyA of 5 mg/kg produced Psoriasis Area Severity Index (PASI) 75 response in between 50 and 97% of patients, whereas lower doses of 2.5 mg/kg yielded PASI 75 in between 28 and 85%. CyA could maintain remission at doses of at least 3 mg/kg/day. Low calory diet in obese patients was shown to improve CyA efficacy. More than 50% of the patients treated with CyA may have an increase in serum creatinin value over 30% of baseline if treatment is prolonged for 2 years. CyA at a dose of 2.5 mg/kg/day was effective for 89% of patients with palmoplantar pustulosis. More than 50% of the patients with erythrodermic psoriasis obtained a significant improvement at doses between 3 and 5 mg/kg/day at 2–4 months. CyA was more effective than etretinate on nail psoriasis.

Conclusion Oral CyA is indicated for patients with plaque psoriasis, pustular psoriasis or erythrodermic psoriasis. The starting dose of 5 mg/kg is associated with a higher degree of clearance. The benefit-risk appears to be better for patients without risk factors for nephrotoxicity: non-obese patients without hypertension and aged below 60. Although CyA is ideally suited for crisis intervention, continuous maintenance treatment with CyA may be envisaged in some patients provided serum creatinin is regularly monitored and the cumulative treatment duration is preferably limited to 2 years or less.

Dermatology. 2011 Jan 22. [Epub ahead of print]

Ustekinumab and Herpes Zoster.

Failla V, Nikkels AF.

Background: TNF- α antagonists may increase the risk of herpes zoster (HZ), as well as the duration and severity. Recently, the monoclonal antibody ustekinumab, blocking the p40 subunit of IL-12 and IL-23, has been introduced for treating moderate to severe plaque psoriasis. There are no PubMed reports of HZ occurring in people receiving ustekinumab treatment. Common HZ was reported in clinical trials.

Observation: Two patients with severe psoriasis treated with ustekinumab developed severe contiguous multidermatomal HZ 1 and 9 months after treatment initiation. **Discussion:** The occurrence of HZ after the instauration of ustekinumab suggests a causal relationship. Indeed, the inhibition of the p40 subunit of IL-12 shifts the immune response towards a Th1 profile with diminished IFN- γ and TNF- α expression, decreasing the antiviral immune response. **Conclusion:** Ustekinumab is probably a risk factor for developing HZ. Anti-HZ vaccination prior to ustekinumab treatment should be considered.

Clin Rheumatol. 2011 Mar 8. [Epub ahead of print]

Development of sarcoidosis 6-month post discontinuation of etanercept: coincidence or real association?

Haroon M, Ryan JG, Harney S.

There have been numerous reports of granulomatous diseases developing in patients receiving anti-tumour necrosis factor (TNF) therapy. Herein, we report a patient who developed sarcoidosis 6 months after discontinuation of etanercept. To date, all reported cases have occurred in patients undergoing ongoing treatment with TNF blockers with resolution on its discontinuation. A 47-year-old man was diagnosed with seropositive rheumatoid arthritis (RA) in 2003. He was initially treated with methotrexate and corticosteroids. In 2005, adalimumab was added due to ongoing disease activity. However, he had persistent low-grade synovitis of bilateral wrist joints and remained oral glucocorticoids dependent. In October 2008, adalimumab was switched to etanercept with marginal benefit; however, etanercept was continued until March 2009. Rituximab was discontinued due to an immediate allergic reaction. In September 2009, he developed bilateral ankle synovitis with erythema nodosum. Further investigations (chest X-ray and CT scan of thorax) revealed new development of bilateral hilar lymphadenopathy and interstitial nodular changes typical of sarcoidosis. His baseline therapy of methotrexate was continued. His recent repeat chest X-ray and CT scan of thorax (March 2010) has shown significant spontaneous resolution of his mediastinal lymphadenopathy and pulmonary nodules. Apart from the initial brief course of NSAIDs, his sarcoidosis resolved spontaneously without requiring any further therapy. For his rheumatoid arthritis, he has been recently commenced on abatacept and his baseline therapy of

methotrexate has been continued. It remains speculative as to whether the concurrence of RA and sarcoidosis is purely serendipitous, or is related to an immunodysregulatory state attributable to TNF blockade.

Pharmazie. 2011 Jan;66(1):5-10.

Dermatologic adverse events: golimumab, friend or foe?

Zidi I, Bartegi A, Ben AN.

Abstract

Golimumab is a fully human anti-TNF-alpha blocker that has demonstrated its efficacy in the treatment of numerous kinds of diseases. Although it is generally safe and well tolerated, various adverse events have been reported. The present aim is to improve the understanding of dermatologic adverse events associated with golimumab following a search of various scientific databases. This systematic review and meta-analysis shows that golimumab is associated neither with severe injection-site reactions nor with injection-site erythema. We found no significant lupus-like syndromes, and no significant skin squamous cell carcinoma. We further suggest systematic dermatologic monitoring in clinical practice during golimumab therapy. Subsequent research should employ a larger cohort of patients to ensure clear and significant future conclusions.

J Eur Acad Dermatol Venereol. 2011 Jan 17. doi: 10.1111/j.1468-3083.2010.03947.x. [Epub ahead of print]

Effective continuous systemic therapy of severe plaque-type psoriasis is accompanied by amelioration of biomarkers of cardiovascular risk: results of a prospective longitudinal observational study.

Boehncke S, Salgo R, Garbaraviciene J, Beschmann H, Hardt K, Diehl S, Fichtlscherer S, Thaçi D, Boehncke WH.

Background Severe psoriasis is associated with significant cardiovascular mortality. **Objectives** We investigated the effects of continuous systemic therapy on the cardiovascular risk of patients with severe plaque-type psoriasis. **Methods** A total of 42 consecutive patients receiving systemic treatment for their severe plaque-type psoriasis were included. The clinical course was monitored over 24 weeks. Initially as well as after 12 and 24 weeks, oral glucose tolerance tests were performed along with comprehensive laboratory monitoring. **Results** Responding patients, defined as a Psoriasis Area and Severity Index (PASI)-50 response, showed correlations between the PASI and high-sensitive C-reactive protein ($r = 0.45$, $P = 0.03$) as well as with vascular endothelial growth factor ($r = 0.76$, $P = 0.007$). The adipokine resistin was positively and the potentially cardio-protective adiponectin was negatively correlated with the PASI ($r = 0.50$, $P = 0.02$ and $r = -0.56$, $P = 0.007$, respectively). Oral glucose tolerance tests yielded a correlation between the PASI and plasma levels for C-peptide ($r = 0.73$, $P = 0.02$) at $t = 120$ min in patients with a pathological Homeostasis Model Assessment (>2.5), indicating that the state of peripheral insulin resistance is driven at least in part by the severity of the psoriatic inflammation. Correlations between the change of adipokine levels and change in PASI were more pronounced among patients with better clinical improvement (PASI-75 vs. PASI-50). **Conclusions** We document an amelioration of biomarkers of cardiovascular risk in patients with severe plaque-type psoriasis responding to continuous systemic therapy. The impact on the patients' metabolic state was found to be better if the psoriatic inflammation was controlled for longer. Future studies need to compare the cardioprotective effects of different treatment modalities, based on hard clinical endpoints.

Rheumatology (Oxford). 2011 Apr;50(4):808-10. Epub 2010 Dec 22.

Regression of lymphoma after withdrawal of infliximab alone in an infliximab/methotrexate-treated RA patient.

Mo N, Muthu S, O'Sullivan M.

No abstract available.

Clin Exp Rheumatol. 2011 Mar 18. [Epub ahead of print]

Assessment of long-term safety and efficacy of etanercept in a 5-year extension study in patients with rheumatoid arthritis.

Klareskog L, Gaubitz M, Rodriguez-Valverde V, Malaise M, Dougados M, Wajdula J.

OBJECTIVES: To evaluate long-term safety and efficacy of etanercept (ETN) in patients with rheumatoid arthritis (RA) without concomitant disease-modifying antirheumatic drug therapy.

METHODS: A total of 549 patients enrolled in this 5-year, open-label extension after completing 1 of 2 randomised controlled studies; all patients received ETN 25 mg twice weekly during the extension. Safety assessments included physical exams, adverse events (AEs), vital signs, laboratory tests, and autoantibody evaluations. Key efficacy endpoints included numbers of responders achieving the American College of Rheumatology (ACR) criteria, low disease activity scores, and disease remission.

RESULTS: Three hundred and eight (56%) patients completed the 5-year extension study. Total ETN exposure, including that received during the double-blind studies was 2212 patient-years. Withdrawals for efficacy- and safety-related reasons were 12% and 19%, respectively. The most common AE was upper respiratory infection (44%). Rates of serious infections decreased over the 5-year period; one case of suspected tuberculosis was reported. Rates of malignancies remained generally consistent during the 5-year period. There were no reports of demyelinating disease, serious blood dyscrasias, or opportunistic infections. The relationship between autoantibody titres and clinical events was not statistically significant. Less than 5% of patients tested positive for anti-etanercept antibodies and all antibodies were non-neutralising. After 5 years, ACR 20, 50, and 70 response rates were 78%, 51%, and 32%, respectively; the mean percentage of patients achieving low disease activity score (DAS ≤ 2.4) and remission (DAS ≤ 1.6) were 44% and 20%, respectively.

CONCLUSIONS: ETN maintained a favourable safety profile and consistent efficacy throughout the 5-year study duration.

Clin Rev Allergy Immunol. 2011 Mar 15. [Epub ahead of print]

Skin Manifestations Induced by TNF-Alpha Inhibitors in Juvenile Idiopathic Arthritis.

Pontikaki I, Shahi E, Frasin LA, Gianotti R, Gelmetti C, Gerloni V, Meroni PL.

The tumor necrosis factor alpha (TNF α) inhibitors have been used with good clinical results in the treatment of juvenile idiopathic arthritis (JIA). Anti TNF α therapy is generally well tolerated. Besides the site injection reactions, other various cutaneous manifestations have been encountered as adverse events. Here, we report four young patients receiving treatment with anti-TNF α (infliximab, adalimumab, and etanercept) for JIA developing different skin manifestations more than 1 year after the initiation of therapy. They underwent a dermatological exam. All four patients were ACR-Ped 30 responders to anti-TNF drugs. The first patient developed cutaneous vasculitis, the second one had lichen planus manifestations, while the third and the fourth developed psoriatic palmoplantar pustulosis accompanied by plaque-type psoriasis localized to the scalp. None of the patients had a personal or family history of dermatological diseases. In the first two patients, skin lesions healed with topical treatment after the discontinuation of anti-TNF agent, while psoriatic lesions did not resolve despite discontinuation of the drug and dermatological treatment. TNF inhibition can be both anti-inflammatory and pro-inflammatory. Cutaneous manifestations could be considered as a paradoxical adverse event of the anti-TNF-alpha treatment not only in rheumatoid arthritis but also in juvenile idiopathic arthritis.

Arthritis Care Res (Hoboken). 2010 Oct 18. [Epub ahead of print]

Systematic review and meta-analysis: Anti-tumor necrosis factor alpha therapy and cardiovascular events in rheumatoid arthritis.

Barnabe C, Martin BJ, Ghali WA.

OBJECTIVE: Control of rheumatoid arthritis (RA) may reduce the risk of cardiovascular (CV) events. We sought to systematically assess the association between anti-tumor necrosis factor alpha (anti-TNF) therapy in RA and CV event rates.

METHODS: Observational cohorts and randomized clinical trials (RCTs) reporting on CV events (all events, myocardial infarction (MI), congestive heart failure (CHF), and cerebrovascular accident (CVA)) in RA patients treated with anti-TNF therapy compared to traditional disease modifying drugs were identified from a search of PubMed (1950 to November 2009), EMBASE (1980 to November 2009), and conference abstracts. Relative risks or hazard ratios and confidence intervals (CI) were extracted. If incidence was reported, additional data were extracted to calculate an incidence density ratio and its variance.

Literature Update Immunology – Period Fehler! Verweisquelle konnte nicht gefunden werden.

RESULTS: The systematic review and meta-analysis includes 16 and 13 publications respectively. In cohort studies, anti-TNF therapy was associated with a reduced risk for all CV events (pooled adjusted RR 0.46; 95%CI 0.28-0.77), MI (pooled adjusted RR 0.81; 95%CI 0.68-0.96), and CVA (pooled adjusted RR 0.69; 95%CI 0.53-0.89). Meta-analysis of RCTs also produced a point estimate indicating lower risk of CV events but this was not statistically significant (pooled relative risk of 0.85; 95%CI 0.28-2.59). **CONCLUSION:** Anti-TNF therapy is associated with a reduced risk of all CV events, MI and CVA in observational cohorts. There was heterogeneity among cohort studies and possible publication bias. The point estimate of effect from RCTs is underpowered with wide confidence intervals, and CV events were secondary outcomes, but RCTs also demonstrated a trend towards decreased risk.

Rheumatology (Oxford). 2011 Mar 22. [Epub ahead of print]

Influence of immunogenicity on the efficacy of long-term treatment with infliximab in rheumatoid arthritis.

Pascual-Salcedo D, Plasencia C, Ramiro S, Nuño L, Bonilla G, Nagore D, Ruiz Del Agua A, Martínez A, Aarden L, Martín-Mola E, Balsa A.

Objective. To analyse the clinical relevance of the production of anti-infliximab antibodies (anti-infliximab Abs) in patients with RA undergoing infliximab treatment over a prolonged period of time. **Methods.** Clinical characteristics, serum trough infliximab and antibody levels were evaluated in 85 RA patients treated with infliximab for a median of 4.42 (interval 0.4-10.2) years. DAS in 28 joints (DAS-28), EULAR response criteria and survival of treatment were assessed at 3 time points (6 months, 12 months and >4 years). **Results.** Antibodies against infliximab were detected in 28 (32.9%) patients and were present in all EULAR non-responder patients. Antibody levels were higher in EULAR non-responders throughout the study period ($P=0.05$ at 6 months, $P=0.02$ at 1 year, $P=0.003$ at >4 years) compared with EULAR (good and moderate) responders. Nine (10.5%) patients, all of them with high-serum anti-infliximab Ab levels, developed infusion-related reactions. Patients with anti-infliximab Abs more often required increased infliximab doses (51.7%) ($P=0.032$) and median survival time on treatment was shorter (4.15 vs 8.89 years) ($P=0.0006$). MTX co-therapy was not associated with lower proportion of anti-infliximab Ab-positive patients, but those receiving both infliximab and MTX had lower levels of anti-infliximab Abs ($P=0.073$) and longer survival ($P=0.015$) on treatment. **Conclusion.** The formation of anti-infliximab Abs during treatment with infliximab is associated with a loss of clinical response, the appearance of infusion reactions and discontinuation of treatment.

Br J Dermatol. 2011 Mar 24. doi: 10.1111/j.1365-2133.2011.10328.x. [Epub ahead of print]

New onset polyarthritis during successful treatment of hidradenitis suppurativa with infliximab.

van Rappard DC, Mooij JE, Baeten DL, Mekkes JR.

Background: Hidradenitis suppurativa (HS) can be associated with several forms of arthritis, usually considered as reactive arthritis. A new observation is that some HS patients develop arthritis after treatment with infliximab (anti-TNF-alpha). **Objectives:** A retrospective study was performed to establish the frequency and clinical presentation of new onset arthritis during infliximab treatment. **Methods:** Between 2005 and 2009, 27 individuals with severe HS were treated with infliximab and followed-up closely. Laboratory parameters and side-effects were recorded. The frequency of arthritis was compared to control groups consisting of 227 HS patients not treated with any biological, 22 HS patients treated with adalimumab and 28 patients with psoriasis treated with infliximab, in the same period and same clinic. **Results:** Five of the 27 HS patients (18.5%) treated with infliximab developed an acute and painful polyarthritis during treatment. The arthritis occurred on average after 12 months of treatment, was not clearly associated with anti-infliximab antibodies, and resolved on average after 4 months. Interestingly, none of the patients had suffered from arthritis before despite the long duration of HS and all showed a good skin response to infliximab. Moreover, arthritis was not observed in any of the control groups. Compared to the adalimumab group and the psoriasis group, an odds ratio of 7.241 (95% CI 1.15 to 45.6) and 9.025 (95% CI 1.45 to 55) were calculated. **Conclusions:** The five cases described in this article suggest that infliximab treatment in HS can induce a transient but severe polyarthritis. The underlying mechanisms remain to be further investigated.