2009 Annual Evidence Update on Psoriasis

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Welcome to the third Annual Evidence Update on Psoriasis produced by NHS Evidence - skin disorders, with the results of a search for new guidelines and systematic reviews published or indexed since the last Annual Evidence Update in November 2008. There is also a "what's new" analysis, discussing the new evidence and its implications for clinical practice. The Annual Evidence Update is timed to correspond with Psoriasis Awareness Week.

2009 Annual Evidence Update on Psoriasis - Introduction

Introduction by Professor Hywel Williams (Clinical Lead) and Dr Douglas Grindlay (Information Specialist), NHS Evidence - skin disorders

Welcome to the 2009 Annual Evidence Update on Psoriasis from NHS Evidence - skin disorders. As regular readers will know, the Annual Evidence Update is a summary of important new evidence published or indexed over the least year since our 2008 Annual Evidence Update. Although NHS Evidence - skin disorders is aimed at healthcare professionals, we hope that many people who have psoriasis will also find some of the information of interest.

Our Annual Evidence Updates search for new evidence in the form of systematic reviews and guidelines. We use systematic reviews as our core evidence source for Annual Evidence Updates because of the well-known hazards in interpreting the results of single research studies (see, for example, Ioannidis 2005).

The citations we found have been listed under relevant headings in our Results section, with links to PubMed or free full text where available, should you wish to read more. At the end of the Results section we have provided a list of excluded references with our reasons for exclusion—usually because they lack a clear search methodology, or because the articles are consensus statements based on expert opinion rather than an explicit search for all the relevant evidence.

This year we have made the decision to include in our Results some reviews that searched only one database (usually MEDLINE). However, where this is the case we have added a note to this effect. It is quite possible that such systematic reviews will have missed some evidence, and their methodology should be contrasted with the comprehensive searches of multiple databases that are carried out for Cochrane Reviews. However, existing definitions of a systematic review (for example in the Glossary of Cochrane Collaboration Terms) and also the new PRISMA statement on reporting of systematic reviews do not specify the number and nature of databases that should be searched, so for now we have included systematic reviews that searched only one database.

Quite a lot of new systematic reviews on psoriasis have appeared since our last Annual Evidence Update, so we are really pleased that once again Dr Richard Warren and Professor Christopher Griffiths from Salford Royal Foundation Hospital and the University of Manchester have kindly agreed to provide our commentary, to guide health professionals on what the evidence means for clinical practice. They have written an easy to read tour of “what’s new” in psoriasis based on the new evidence we have found, and we do recommend that you start with their commentary. We would like to express our particular thanks to Richard, who took the lead in writing the commentary despite having just started a busy two month fellowship in the United States.

By the way, the commentary from the 2008 Annual Evidence Update on Psoriasis has recently been published as a review paper in *Clinical and Experimental Dermatology*, so do have a look if you want to read up on what we found last year (Link to PubMed abstract).

2009 Annual Evidence Update on Psoriasis - Results

A literature search was carried out to identify **new guidelines and systematic reviews** relating to psoriasis that have been published or indexed since the 2008 Annual Evidence Update on Psoriasis. The result of this search is the **2009 Annual Evidence Update on Psoriasis** from NHS Evidence - skin disorders.

Search period

January 2008 was set as the limit for earliest publication date in this year's searches, to allow for any delays in indexing of citations in the bibliographic databases used (which might mean the citations were not found in the searches for the previous Annual Evidence Update in November 2008).
All the searches were carried out for the last time on 13th October, 2009.

Sources Searched

The following sources were searched:

- Ovid MEDLINE (using SIGN MEDLINE systematic review filter)
- Ovid EMBASE (using SIGN EMBASE systematic review filter)
- PubMed (using PubMed Clinical Queries systematic review filter)
- Cochrane Library
- NHS Evidence - skin disorders

All citations found in the searches were hand searched by reading the titles and abstracts to identify systematic reviews and potential systematic reviews relevant to atopic eczema. For all potential systematic reviews where there was still some doubt, the full texts were then read to ensure that they were indeed systematic reviews.
The definition of a systematic review from the Glossary of Cochrane Collaboration Terms on the Cochrane Collaboration website was used:
“A review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review. Statistical methods (meta-analysis) may or may not be used to analyse and summarise the results of the included studies.”

RESULTS

New guidelines and citations for new systematic reviews judged of direct relevance to the topic of psoriasis and its treatment are listed below, with the systematic reviews arranged by topic. Within each topic, the citations are presented in reverse chronological order, i.e. most recent first. Links to PubMed abstracts and full text, where available, are provided.
Please note that the inclusion of citations in this list does not imply endorsement. NHS Evidence - skin disorders does not accept responsibility for the content or quality of included studies.
A number of citations were identified as possible systematic reviews for the Annual Evidence Update in the initial sift of the search results, but were subsequently excluded on the grounds of insufficient relevance or the lack of a clear systematic review methodology. These are listed at the end of this page.

UK Guidelines

NICE Technology Appraisal 180 - Ustekinumab for the treatment of moderate to severe psoriasis.
Link to full text

Overseas and international guidelines

Pathirana D, Ormerod AD, Saiag P, et al.
European S3-guidelines on the systemic treatment of psoriasis vulgaris.
Journal of the European Academy of Dermatology and Venereology 2009 Oct;23 (Suppl 2):1-70.
Link to PubMed abstract

Menter A, Korman NJ, Elmets CA, Feldman SR, Gelfand JM, Gordon KB, Gottlieb AB, Koo JY, Lebwohl M, Lim HW, Van Voorhees AS, Beutner KR, Bhushan R.
Guidelines of care for the management of psoriasis and psoriatic arthritis: Section 4. Guidelines of care for the management and treatment of psoriasis with traditional systemic agents.
Journal of the American Academy of Dermatology 2009 Sep;61(3):451-85. Epub 2009 Jun 3.
Link to full text (PDF file)
Note: Only MEDLINE searched.

Menter A, Korman NJ, Elmets CA, Feldman SR, Gelfand JM, Gordon KB, Gottlieb A, Koo JY, Lebwohl M, Lim HW, Van Voorhees AS, Beutner KR, Bhushan R; American Academy of Dermatology.
Guidelines of care for the management of psoriasis and psoriatic arthritis: Section 3. Guidelines of care for the management and treatment of psoriasis with topical therapies.
Journal of the American Academy of Dermatology 2009 Apr;60(4):643-59. Epub 2009 Feb 13.
Link to full text (PDF file)
Note: Only MEDLINE searched.

Co-morbidities

Willemsen R, Roseeuw D, Vanderlinden J.
Alexithymia and dermatology: the state of the art.
International Journal of Dermatology 2008 Sep;47(9):903-10.
Link to PubMed abstract

Therapies for psoriasis in general

Naldi L, Rzany B.
Psoriasis (chronic plaque).
Clinical Evidence (Online) 2009 Jan 9;2009. pii: 1706.
Link to PubMed abstract

Topical therapies for psoriasis in general

Mason AR, Mason J, Cork M, Dooley G, Edwards G.
Topical treatments for chronic plaque psoriasis.
Cochrane Database of Systematic Reviews 2009, Issue 2. Art. No.: CD005028.
Link to full text

Systemic therapies for psoriasis in general

Bansback N, Sizto S, Sun H, Feldman S, Willian MK, Anis A.
Efficacy of systemic treatments for moderate to severe plaque psoriasis: systematic review and meta-analysis.
Dermatology 2009 Aug 5. [Epub ahead of print].
Link to PubMed abstract

Methotrexate for psoriasis

Prey S, Paul C.
Effect of folic or folinic acid supplementation on methotrexate-associated safety and efficacy in inflammatory disease: a systematic review.
British Journal of Dermatology 2009 Mar;160(3):622-8. Epub 2008 Oct 20.
Link to PubMed abstract
Link to DARE abstract

Biological therapies for psoriasis

Scanlon JV, Exter BP, Steinberg M, Jarvis CI.
Ustekinumab: treatment of adult moderate-to-severe chronic plaque psoriasis.
Annals of Pharmacotherapy 2009 Sep;43(9):1456-65. Epub 2009 Aug 11.
Link to PubMed abstract

Moustou AE, Matekovits A, Dessinioti C, Antoniou C, Sfikakis PP, Stratigos AJ.
Cutaneous side effects of anti-tumor necrosis factor biologic therapy: a clinical review.
Journal of the American Academy of Dermatology 2009 Sep;61(3):486-504. Epub 2009 Jul 22.
Link to PubMed abstract
Note: Only MEDLINE searched.

Schmitt J, Wozel G.
Targeted treatment of psoriasis with adalimumab: a critical appraisal based on a systematic review of the literature.
Biologics 2009;3:303-18. Epub 2009 Jul 13.
Link to full text
Note: Only MEDLINE searched.

Loveman E, Turner D, Hartwell D, Cooper K, Clegg A.
Infliximab for the treatment of adults with psoriasis.
Health Technology Assessment 2009 Jun;13 (Suppl 1):55-60.
Link to full text

Dharamsi JW, Bhosle M, Balkrishnan R, Yentzer BA, Feldman SR.
Using 'number needed to treat' to help conceptualize the magnitude of benefit and risk of tumour necrosis factor-alpha inhibitors for patients with severe psoriasis.
British Journal of Dermatology 2009 Sep;161(3):605-16. Epub 2009 Apr 24.
Link to PubMed abstract

Zhang Z, Schmitt J, Wozel G, Kirch W.
[Treatment of plaque psoriasis with biologics. A meta-analysis of randomized controlled trials] (Article in German).
Medizinische Klinik (Munich). 2009 Feb 15;104(2):125-36. Epub 2009 Feb 26.
Link to PubMed abstract

Levy-Roy A, Porcher R, de Fonclare AL, Morel P, Dupuy A.
[Efficacy of TNF-alpha antagonists for plaque-type psoriasis: a systematic review and graphical presentation] (Article in French).
Annales de Dermatologie et de Venereologie 2009 Apr;136(4):315-22. Epub 2009 Jan 30.
Link to PubMed abstract

Induction of psoriasis by biologic therapies

Fiorino G, Allez M, Malesci A, Danese S.
Review article: anti TNF-alpha induced psoriasis in patients with inflammatory bowel disease.
Alimentary Pharmacology & Therapeutics 2009 May 1;29(9):921-7. Epub 2009 Feb 10.
Link to PubMed abstract

Ko JM, Gottlieb AB, Kerbleski JF.
Induction and exacerbation of psoriasis with TNF-blockade therapy: a review and analysis of 127 cases.
Journal of Dermatological Treatment 2009;20(2):100-8.
Link to PubMed abstract

Alternative and complementary therapies for psoriasis

Smith N, Weymann A, Tausk FA, Gelfand JM.
Complementary and alternative medicine for psoriasis: A qualitative review of the clinical trial literature.
Journal of the American Academy of Dermatology 2009 Aug 5. [Epub ahead of print]
Link to PubMed abstract

Falagas ME, Zarkadoulia E, Rafailidis PI.
The therapeutic effect of balneotherapy: evaluation of the evidence from randomised controlled trials.
International Journal of Clinical Practice 2009 Jul;63(7):1068-84.
Link to PubMed abstract

Therapies for scalp psoriasis

Chan CS, Van Voorhees AS, Lebwohl MG, Korman NJ, Young M, Bebo BF Jr, Kalb RE, Hsu S.
Treatment of severe scalp psoriasis: from the Medical Board of the National Psoriasis Foundation.
Journal of the American Academy of Dermatology 2009 Jun;60(6):962-71. Epub 2009 Apr 17.
Link to PubMed abstract
Note: Only MEDLINE searched.

Therapies for intertriginous psoriasis

Kalb RE, Bagel J, Korman NJ, Lebwohl MG, Young M, Horn EJ, Van Voorhees AS; National Psoriasis Foundation.
Treatment of intertriginous psoriasis: from the Medical Board of the National Psoriasis Foundation.
Journal of the American Academy of Dermatology 2009 Jan;60(1):120-4.
Link to PubMed abstract
Note: Only MEDLINE searched.

EXCLUDED REFERENCES

Naldi L, Svensson A, Zenoni D, Diepgen T, Elsner P, Grob JJ, Coenraads PJ, Bouwes Bavinck JN, Maccagni A, Linder D, Williams H; on behalf of the European Dermato-Epidemiology Network (EDEN).
Comparators, study duration, outcome measures and sponsorship in therapeutic trials of psoriasis. Update of the EDEN Psoriasis Survey 2001-2006.
British Journal of Dermatology 2009 Sep 24. [Epub ahead of print]
Link to PubMed abstract
Note: Trials found by hand searching 14 specified journals rather than a comprehensive database search.

Nannini C, Cantini F, Niccoli L, Cassarà E, Salvarani C, Olivieri I, Lally EV.
Single-center series and systematic review of randomized controlled trials of malignancies in patients with rheumatoid arthritis, psoriatic arthritis, and ankylosing spondylitis receiving anti-tumor necrosis factor alpha therapy: is there a need for more comprehensive screening procedures?
Arthritis and Rheumatism 2009 Jun 15;61(6):801-12.
Link to PubMed abstract
Note: Not judged sufficiently relevant for psoriasis therapy.

Kalb RE, Strober B, Weinstein G, Lebwohl M.
Methotrexate and psoriasis: 2009 National Psoriasis Foundation Consensus Conference.
Journal of the American Academy of Dermatology 2009 May;60(5):824-37.
Link to PubMed abstract
Note: Consensus statement with no indication of systematic review methodology.

Puig Sanz L, Sáez E, Lozano MJ, Bordas X, Carrascosa JM, Gallardo F, Luelmo J, Sánchez-Regaña M, Alsina M, García-Patos V; Grupo Español de Psoriasis de la Academia Española de Dermatología

y Venereología.
[Reactions to infliximab infusions in dermatologic patients: consensus statement and treatment protocol. Working Group of the Grupo Español de Psoriasis de la Academia Española de Dermatología y Venereología] (Article in Spanish).
Actas Dermo-Sifiliograficas 2009 Mar;100(2):103-12.
Link to PubMed abstract
Note: Consensus statement with no indication of systematic review methodology.

Morton CA, McKenna KE, Rhodes LE; British Association of Dermatologists Therapy Guidelines and Audit Subcommittee and the British Photodermatology Group.
Guidelines for topical photodynamic therapy: update.
British Journal of Dermatology 2008 Dec;159(6):1245-66. Epub 2008 Oct 13.
Link to full text (PDF file)
Note: Only brief reference to psoriasis and no randomised controlled trials included.

2009 Annual Evidence Update on Psoriasis - Commentary

"What's new?" - An analysis of the clinical significance of new guidelines and systematic reviews found in the 2009 Annual Evidence Update on Psoriasis
Dr Richard B Warren, Dr Benjamin C Brown and Professor Christopher EM Griffiths, Epithelial Sciences, Salford Royal Foundation Hospital, The University of Manchester, and Dr Douglas JC Grindlay, NHS Evidence - skin disorders, The University of Nottingham

Introduction
This is the third NHS Evidence Annual Evidence Update on Psoriasis. Using the same methods as for the first two, the NHS Evidence - skin disorders team have searched for all relevant new guidelines and systematic reviews published or indexed in the last 12 months since the 2008 Annual Evidence Update. Please see the Methodology for details of how the searches were carried out. The citations that were found (rather more than last year) can be seen on the Results page. This commentary reviews the clinical significance of these publications. Each publication can be read in more detail by following the links to its PubMed abstract or free full text.

UK guidelines
In September 2009 the National Institute for Health and Clinical Excellence (NICE) published guidance on the use of ustekinumab, the first in a new class of biologic therapies targeting interleukins 12 and 23 (Link to full text). Ustekinumab can be initiated in patients with severe psoriasis—defined as Psoriasis Area Severity Index (PASI) of 10 or more and a Dermatology Life Quality Index (DLQI) score of 10 or more—who have not responded and/or are unsuitable for standard systemic therapies, including ciclosporin, methotrexate and psoralen and ultraviolet A radiation (PUVA). Importantly, the manufacturer is providing the 90 mg dose, for individuals who weigh more than 100 kg, at the same total cost as those who are on the 45 mg dose. Continuation of treatment is dependent on achieving a 75% improvement from baseline PASI (PASI 75) or a 50% reduction from baseline PASI (PASI 50) with a 5 point reduction in DLQI after 16 weeks of treatment.

Overseas and international guidelines
The American Academy of Dermatology (AAD) has this year produced two more sections of a six-part series of guidelines on psoriasis and psoriatic arthritis. Section 3 (Link to full text, PDF file) deals with the use of topical therapies, with a number of very useful summary tables guiding safe and effective use of commonly used topical agents. Section 4 (Link to full text, PDF file) is on traditional systemic therapies, focusing on the use of methotrexate, ciclosporin and acitretin; less commonly used agents such as fumaric acid esters are only briefly discussed. Again, in Section 4 a series of useful tables has been collated. However, it is important to note differences that exist between the AAD guidelines and UK guidelines; for example, with the monitoring of long-term liver toxicity whilst on treatment with methotrexate, the AAD still utilise liver enzymes alongside liver biopsy, with amino terminal pro-peptide of pro-collagen III, a key part of UK guidelines, generally being unavailable in the USA.
In October 2009 the European S3-Guidelines on the systemic treatment of psoriasis vulgaris were published (Link to PubMed abstract), which include therapeutic recommendations on methotrexate, ciclosporin, retinoids, fumaric acid esters, biologics and phototherapy. This is a comprehensive document that is well worth reading. As a general statement, the consensus from the wide array of

international authors involved was that for the treatment of moderate to severe psoriasis, ciclosporin and narrowband UVB should mainly be used as induction agents, methotrexate and fumaric acid esters offer good long-term options, and the role of biologic therapies is in those who fail and/or are unsuitable for traditional agents. For those just wanting key points from this paper, the therapeutic recommendations are highlighted at the end of each section; however, it is worth noting the comprehensive guidance on monitoring tests and potential drug interactions given in the text.

Co-morbidities

Alexithymia is a personality trait characterized by difficulties in differentiating and describing feelings. Willemsen *et al*. (2008) (Link to PubMed abstract) undertook a systematic review to see if this condition is associated with a number of dermatological conditions including psoriasis, atopic eczema, vitiligo, alopecia and urticaria. Differing results have been reported, some studies finding an association between alexithymic traits and psoriasis, whilst others have not. It may be that assessing a personality trait is not the best way to untangle the complex interactions between stress and psoriasis!

Topical therapies for psoriasis in general

The largest ever review performed by the Cochrane Skin Group, by Mason *et al*., was published this year on the topic of topical therapies used in the treatment of chronic plaque psoriasis (Link to full text). The evidence presented was based on a total of 131 studies that included 21,448 people! Most of the studies were carried out for a period of around 6 weeks, although the range was from 1-24 weeks. This review confirms the efficacy of vitamin D analogues, potent and very potent topical corticosteroids, dithranol and tazoretene versus placebo. Comparison studies between treatments revealed similar efficacy for vitamin D analogues and potent or very potent corticosteroids when used on the body; in contrast, corticosteroids proved more efficacious as a treatment for scalp psoriasis. Combined formulations of corticosteroids and vitamin D analogues were more effective than either agent in single formulation. The overall safety of topical therapies was high, although skin irritation when using vitamin D analogues makes it more likely our patients will stop this therapy in contrast to a topical corticosteroid.

The major unanswered question from this systematic review is that of the long-term efficacy and safety of topical therapies, where studies are few and far between.

Systemic therapies in general for psoriasis

Included in the Results lists is a systematic review by Bansback *et al*. (2009) on systemic treatments for moderate to severe plaque psoriasis (Link to PubMed abstract). However, we were unable to access the full text, and as the title and scope of this review is very similar to that of the review by Schmitt *et al*. (2008) included in last year's Annual Evidence Update (Link to PubMed abstract), it is not discussed further here.

Methotrexate for psoriasis

The question of whether folic acid/folinic acid supplementation is helpful alongside methotrexate in the treatment of psoriasis and/or rheumatoid arthritis (RA) has never been adequately addressed in a large scale, randomised, placebo controlled trial. A 2009 systematic review by Prey and Paul (Link to PubMed abstract) found six small randomised, controlled trials of folic acid/folinic acid versus placebo being used alongside methotrexate as a treatment for psoriasis or RA, in a total sample of 648 patients. Overall, supplementation with folic acid/folinic acid significantly reduced hepatic side effects, with a non-significant trend towards reduced levels of gastrointestinal and mucocutaneous side effects. No analysis of a possible reduction of methotrexate efficacy with folic acid supplementation was possible, as treatment response outcome measures used in the included studies were variable.

Biological therapies for psoriasis

As ever the number of publications on the use of biologic therapies for the treatment of psoriasis has continued to rise at a fast and furious rate.

Dharamsi *et al*. (2009) from the USA have published an interesting article attempting to weigh up the risk-benefit ratio of anti-tumour necrosis factor (anti-TNF) therapy to aid our pre-treatment counselling of psoriasis patients (Link to PubMed abstract). Using a number needed treat analysis they compared the risk of serious adverse events from treatment with anti-TNF therapy (limited to tuberculosis, lymphoma and demyelinating disease) to the risk of death from driving a car. The numbers needed to benefit were 2.1 for etanercept, 1.4 for infliximab, and 1.6 for adalimumab, while the numbers needed to harm ranged from 380 to 360,000 treated patients per year, depending on the adverse event. The

authors found that patients are about as likely to die in a car accident as to have a serious adverse event from treatment with an anti-TNF therapy, and concluded that the benefits greatly outweigh the risks.
On the same theme, Moustou *et al*. (2009) (Link to PubMed abstract) performed a systematic MEDLINE search of all publications (including case reports and case series) of cutaneous adverse events that have occurred whilst patients are on anti-TNF therapy. Due to the restrospective and fragmented way in which the data have been collected it is not possible to ascertain if rarely reported events, such as malignant melanoma, are linked to this class of drugs—a strong argument to encourage us all to make the British Association of Dermatologists' Biologics Intervention Register (BADBIR) a success. Nonetheless, it is clear from the data presented that the vast majority of commonly occurring cutaneous side effects, such as infusion reactions, injection site reactions and skin infections, can be easily managed, usually while continuing therapy.
Turning to individual biologic therapies, a systematic review by Scanlon *et al*. (2009) (Link to PubMed abstract) has examined all aspects of ustekinumab use in psoriasis, from basic pharmacology through to the results of recent phase III trials. These key studies have shown that ustekinumab is well tolerated, with similar levels of adverse events to placebo. Efficacy of the drug is impressive, with a PASI 75 close to 70% after twelve weeks of treatment. Furthermore, this review comments on the first head to head trial between biologic therapies, the ACCEPT trial, which demonstrated that ustekinumab's short-term efficacy is superior to that of high dose etanercept (50 mg twice weekly). The article rightly states that long-term safety data are required for this biologic therapy—of course best done by ensuring all your patients are entered onto BADBIR!
Schmitt and Wozel (2009) (Link to full text) critically appraised the use of adalimumab in the treatment of psoriasis, finding from the five published randomised controlled trials included in their review that the drug is effective in the treatment of psoriasis and psoriatic arthritis, well tolerated and cost effective versus other anti-TNF therapies. The review rightly states a need for comparative studies between biologic agents; there are currently none involving adalimumab.
A recent Health Technology Assessment review on infliximab by Loveman *et al*. (2009) (Link to full text) presents a summary of the thoughts of the Evidence Review Group (ERG) on the quality of the data presented to the NICE panel when considering this therapy's utility in the treatment of psoriasis. The ERG's job is to evaluate critically the data as they are mainly presented from the manufacturers of the therapy. Although the ERG found that the included data from the four identified infliximab trials were robust, they did not agree with the pooling of these data nor the indirect comparisons made between different biologic therapies, once again highlighting the need for high quality, head to head studies between biologic agents.
Finally in the Results list there are two foreign language reviews of biologic therapies for plaque psoriasis, by Zhang *et al*. (2009) (Link to PubMed abstract) and Levy-Roy *et al*. (2009) (Link to PubMed abstract). These papers cover similar ground to several papers included in the 2008 Annual Evidence Update on Psoriasis, so will not be discussed further here.

Induction of psoriasis by biologic therapies
The paradox of new-onset psoriasis occurring in patients treated with anti-TNF therapy was reported in last year's Annual Evidence Update and has now been evaluated in a systematic review by Ko *et al*. (Link to PubMed abstract). This review looks at 127 cases of this phenomenon and, as with the report last year, a significant proportion of the cases were "palmo plantar pustular psoriasis". Last year we made the point that palmo plantar pustulosis is a genetically distinct condition from psoriasis and many clinicians now simply refer to this condition as palmo plantar pustulosis. Unlike the report from last year a significant proportion of patients actually had to stop their anti-TNF therapy, as additional topical modalities employed were ineffective. The explanation for this paradox remains a mystery.
Another review by Fiorino *et al*. (2009) (Link to PubMed abstract) just considered anti TNF-alpha induced psoriasis in patients with inflammatory bowel disease.

Alternative and complementary therapies for psoriasis
A qualitatative systematic review of randomised clinical trails of alternative therapies, including various herbal and nutritional supplements, acupuncture and Chinese medicine, was recently published by Smith *et al*. (Link to PubMed abstract). Although an interesting read, not surprisingly the conclusion was that the studies were generally poorly designed with unreliable results. Further large scale, placebo controlled studies are needed before we can recommend such treatments to our patients.

Another 2009 publication by Falagas *et al*. (Link to PubMed abstract) assessed the effect of balneotherapy, defined as the use of baths containing thermal mineral waters from natural springs at a temperature of at least 20 C and with a mineral content of at least 1 g/l, in rheumatological, dermatological and neurological diseases. Of the studies evaluated, three focused on balneotherapy either alone or in conjunction with phototherapy as a treatment for psoriasis. Balneotherapy did not appear to have a sparing effect on UVB dosages or prolong remission of psoriasis. However, if you suffer from musculoskeletal pain, balneotherapy does appear effective and may be worth a go!

Therapies for scalp psoriasis
Although the scalp is the part of the body most commonly afflicted by psoriasis, the evidence for use of treatments for this body site is limited, a point highlighted in a 2009 review by Chan *et al*. from the Medical Board of the US National Psoriasis Foundation (Link to PubMed abstract). Furthermore, as with most trials involving topical therapies, long-term data are lacking. The authors do produce a treatment algorithm including intra-lesional corticosteroids second line, a treatment not widely employed in the UK. Unfortunately, due to most of the trials of topical therapies including patients with moderate scalp involvement, the paper is also unable to address satisfactorily the best treatments for severe hyperkeratotic scalp psoriasis, which often requires descaling topical therapies prior to topical corticosteroids or vitamin D analogues.

Therapies for intertriginous psoriasis
Finally, the Medical Board of the US National Psoriasis Foundation has attempted to produce helpful evidence-based guidance on the treatment of psoriasis in specific skin sites, in the 2009 paper by Kalb *et al*. (Link to PubMed abstract). This proved a difficult task in the case of flexural psoriasis as the evidence base is poor. However, the review reasonably suggests that the mainstay of short-term treatment (2-4 weeks) is low to mid potency steroids and that longer term treatment requires use of either topical calcipotriol or one of the immunomodulating agents such as tacrolimus.

Link to Psoriasis Association, organisers of Psoriasis Awareness Week

2009 Annual Evidence Update on Psoriasis - Methodology

A literature search was carried out to identify new guidelines and systematic reviews relating to psoriasis and its treatment that have been published or indexed since the 2008 Annual Evidence Update on Psoriasis. The results are the **2009 Annual Evidence Update on Psoriasis** from NHS Evidence - skin disorders.
This webpage describes the search strategies used and the criteria for inclusion in the Annual Evidence Update.

Search period

The search for the 2009 Annual Evidence Update on Psoriasis was for citations published or indexed in 2008 or 2009 and not included in the 2008 Annual Evidence Update.
January 2008 was set as the limit for earliest publication date in most of the searches, to allow for any delays in indexing of citations in the bibliographic databases used (which might mean the citations were not found in the searches for the previous Annual Evidence Update in November 2008).
In the case of PubMed, the search was refined by searching for records *indexed* in the PubMed database in 2008 and 2009 (using the "edat" command), which would find any citations published before 2008 but indexed late and hence not found in last year's search.
All the searches were carried out for the last time on 13 October, 2009.

Sources Searched

The following sources were searched:
Ovid MEDLINE (using SIGN MEDLINE systematic review filter)
Ovid EMBASE (using SIGN EMBASE systematic review filter)
PubMed (using PubMed Clinical Queries systematic review filter)

Cochrane Library
NHS Evidence - skin disorders

The search of PubMed was carried out as an insurance to ensure that no systematic reviews were missed using MEDLINE and EMBASE, especially as PubMed tends to be more up to date and so is better for finding new citations.
The search of the Cochrane Library was also carried out as an insurance, to find relevant citations in the Cochrane Database of Systematic Reviews, the Database of Abstracts of Reviews of Effects (DARE) and the Health Technology Assessment Database. The intention was to confirm that nothing of relevance was missed in the searches of MEDLINE, EMBASE and PubMed.
The search of NHS Evidence - skin disorders was done to find new guidelines and also gave a confirmatory search for new Cochrane Reviews and DARE abstracts.

Systematic review filters
The SIGN systematic review filters developed for Ovid implementations of MEDLINE and EMBASE were used as they provide a reasonable balance between specificity and sensitivity. Details of the SIGN systematic review filters can be found on the following webpage:
http://www.sign.ac.uk/methodology/filters.html

Details of the PubMed Clinical Queries systematic review filter and its validation can be found via the following links:
http://www.nlm.nih.gov/bsd/pubmed_subsets/sysreviews_strategy.html
http://www.nlm.nih.gov/bsd/pubmed_subsets/sysreviews_sources.html

Search Strategies

The search term "psoria*" was chosen to find citatations that referenced "psoriasis", "psoriatic" and "psoriaform".

SIGN MEDLINE systematic review filter
Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations & Ovid MEDLINES
1. Meta-Analysis/
2. meta analy$.tw.
3. metaanaly$.tw.
4. meta analysis.pt.
5. (systematic adj (review$1 or overview$1)).tw.
6. exp Review Literature/
7. or/1-6
8. cochrane.ab.
9. embase.ab.
10. (psychlit or psyclit).ab.
11. (psychinfo or psycinfo).ab.
12. (cinahl or cinhal).ab.
13. science citation index.ab.
14. bids.ab.
15. cancerlit.ab.
16. or/8-15
17. reference list$.ab.
18. bibliograph$.ab.
19. hand-search$.ab.
20. relevant journals.ab.
21. manual search$.ab.
22. or/17-21
23. selection criteria.ab.
24. data extraction.ab.
25. 23 or 24
26. review.pt.
27. 25 and 26

28. comment.pt.
29. letter.pt.
30. editorial.pt.
31. animal/
32. human/
33. 31 not (31 and 32)
34. or/28-30,33
35. 7 or 16 or 22 or 27
36. 35 not 34
37. psoria$.mp. [mp=ti, ot, ab, nm, hw]
38. 37 and 36
39. limit 38 to yr="2008 - 2009"

SIGN EMBASE systematic review filter
Ovid EMBASE
1. exp Meta Analysis/
2. ((meta adj analy$) or metaanalys$).tw.
3. (systematic adj (review$1 or overview$1)).tw.
4. or/1-3
5. cancerlit.ab.
6. cochrane.ab.
7. embase.ab.
8. (psychlit or psyclit).ab.
9. (psychinfo or psycinfo).ab.
10. (cinahl or cinhal).ab.
11. science citation index.ab.
12. bids.ab.
13. or/5-12
14. reference lists.ab.
15. bibliograph$.ab.
16. hand-search$.ab.
17. manual search$.ab.
18. relevant journals.ab.
19. or/14-18
20. data extraction.ab.
21. selection criteria.ab.
22. 20 or 21
23. review.pt.
24. 22 and 23
25. letter.pt.
26. editorial.pt.
27. animal/
28. human/
29. 27 not (27 and 28)
30. or/25-26,29
31. 4 or 13 or 19 or 24
32. 31 not 30
33. psoria$.mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
34. 33 and 32
35. limit 34 to yr="2008 - 2009"

PubMed using Clinical Queries systematic review filter
psoria* AND systematic[sb] AND 2008 : 2009[edat]

Cochrane Library and NHS Evidence - skin disorders
psoria*

Identification of systematic reviews

All citations found in the searches were hand searched by reading the titles and abstracts to identify systematic reviews and potential systematic reviews relevant to psoriasis and its management. A particularly careful analysis of the methods was made to identify citations with a systematic review methodology. For all potential systematic reviews where there was still some doubt, the full texts were then read to ensure that they were indeed systematic reviews.

To determine systematic reviews, the definition of a systematic review from the Glossary of Cochrane Collaboration Terms on the Cochrane Collaboration website was used:

"A review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review. Statistical methods (meta-analysis) may or may not be used to analyse and summarise the results of the included studies."

Using this definition (which was also used in the recent PRISMA statement on reporting of systematic reviews), reviews that only searched one database have been included, but a note has been added to this effect.

The final decision on whether a citation was a systematic review and relevant enough to psoriasis for inclusion made by Professor Hywel Williams, Clinical Lead for NHS Evidence - skin disorders and Co-ordinating Editor of the Cochrane Skin Group.

Lists of the relevant systematic reviews found by combining the results of the different searches are given in the Results page of the 2009 Annual Evidence Update on Psoriasis. Also included at the end of the Results page is a list of citations that were identified as possible candidates in the initial sift of the search results, but were subsequently rejected (mostly on the grounds of incomplete details being given for the methodology).