In this issue:

- Conventional agents in paediatric psoriasis
- Korean psoriasis epidemiology and cardiovascular comorbidities
- Nail involvement as prognostic factor in biological therapy
- Biosimilar ABP 501 vs adalimumab for plaque psoriasis
- Biosimilar GP2015 vs etanercept for plaque psoriasis
- Risk of suicidal death in psoriasis patients
- Calcipotriol + betamethasone dipropionate aerosol foam vs gel
- Comparison of psoriatic patients with and without psoriatic arthritis
- Interleukin-17 antagonists in plaque psoriasis
- Continuous vs interrupted therapy with ixekizumab
- Age group disparities in psoriasis

**Efficacy, safety and drug survival of conventional agents in pediatric psoriasis:** A multicenter, cohort study

**Authors:** Ergün T et al.

**Summary/Comment:** Paediatric psoriasis is not so uncommon; however, research data is rare. This is a Middle Eastern study out of Turkey investigating the efficacy, safety and drug survival of conventional agents in paediatric psoriasis and discover that treatment response was the most significant determinant for drug survival. Following on, we review a Korean study looking at the incidence of cardiovascular comorbidities in patients with psoriasis and discover a significantly higher risk of dyslipidaemia in patients with psoriatic arthritis. Other topics covered in this issue include nail involvement as a prognostic factor in biological therapy, biosimilars for plaque psoriasis, the risk of suicidal death in psoriasis patients, a comparison of calcipotriol + betamethasone dipropionate aerosol foam and gel, and continuous vs interrupted therapy with ixekizumab.

We hope you find the latest issue of Psoriasis Research Review stimulating reading and look forward to any feedback.

Kind Regards,

Clinical Associate Professor Kurt Gebauer
kurt.gebauer@researchreview.com.au

**Epidemiology and cardiovascular comorbidities in patients with psoriasis: A Korean nationwide population-based cohort study**

**Authors:** Oh EH et al.

**Summary:** This Korean cohort study used data from the Korean National Health Insurance Database (2002-10) to determine the demographics and incidence of cerebro-cardiovascular comorbidities in 15,484 patients with psoriasis vulgaris or psoriatic arthritis. Annual psoriasis prevalence increased from 313.2 to 453.5 per 100,000 people between 2002 and 2010; however, the overall psoriasis incidence rate decreased slightly (252.7 to 212.6 per 100,000). Of these 10.8% had psoriatic arthritis. Annual psoriasis prevalence increased from 313.2 to 453.5 per 100,000 people between 2002 and 2010; however, the overall psoriasis incidence rate decreased slightly (252.7 to 212.6 per 100,000). Of these 10.8% had psoriatic arthritis. Other topics covered in this issue include nail involvement as a prognostic factor in biological therapy, biosimilars for plaque psoriasis, the risk of suicidal death in psoriasis patients, a comparison of calcipotriol + betamethasone dipropionate aerosol foam and gel, and continuous vs interrupted therapy with ixekizumab.

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Clinical similarity of biosimilar ABP 501 to adalimumab in the treatment of patients with moderate to severe plaque psoriasis: A randomized, double-blind, multicenter, phase III study

Authors: Papp K et al.

Summary: This 52-week, double-blind study compared ABP 501 (a biosimilar of adalimumab; n = 175) with branded adalimumab (Humira®; n = 175) in patients with moderate-to-severe plaque psoriasis. PASI improvement after 16 weeks (primary endpoint) was 80.9% with ABP 501 and 83.1% with adalimumab (difference -2.2; 95% CI -7.39 to 3.02) and was within the prespecified equivalence margin of ±15. There was no difference between treatment groups in adverse event rates (67.2% vs 63.6%) or antidrug antibody incidence (55.2% vs 63.6%). 52-week data are yet to be published.


The EGALITY study: a confirmatory, randomized, double-blind study comparing the efficacy, safety and immunogenicity of GP2015, a proposed etanercept biosimilar, vs. the originator product in patients with moderate-to-severe chronic plaque-type psoriasis

Authors: Griffiths CEM et al.

Summary: The 52-week, double-blind, randomised EGALITY equivalence trial compared the etanercept biosimilar GP2015 (n = 264) with the branded etanercept (Enbrel®; n = 267) in patients with moderate-to-severe chronic plaque-type psoriasis. PASI 75 response rate at week 12 (primary end point) did not differ between GP2015 and etanercept treatment groups (difference -2.3%; 95% CI -9.85 to 5.30) and was within the pre-specified equivalence margin of ±15. There was no difference between treatment groups in adverse event rates (67.2% vs 63.6%) or antidrug antibody incidence (55.2% vs 63.6%).-52-week data are yet to be published.


Risk of suicidality in people with psoriasis: A systematic review and meta-analysis of cohort studies

Authors: Chi CC et al.

Summary: This meta-analysis of five population-based cohort studies in people with psoriasis was conducted to determine the risk of suicide, suicide attempt, suicidal ideation and suicidality. The analysis found no increase in the risk of suicide (RR 1.13; 95% CI 0.87-1.46), suicide attempt (RR 1.25; 95% CI 0.89-1.73) or suicidality (RR 1.26; 95% CI 0.97-1.64) in people with psoriasis. Likewise a stratified analysis found no increase in risk of suicide, suicide attempt or suicidality in people with mild-to-severe psoriasis.


Calciptiol plus betamethasone dipropionate aerosol foam in patients with moderate-to-severe psoriasis: Sub-group analysis of the PSO-ABLE study

Authors: Paul C et al.

Summary: The 12-week, phase III PSO-ABLE study assessed the response of patients with moderate-to-severe psoriasis to calciptiol 50 µg/g plus betamethasone 0.5 mg/g (Cal/BD) aerosol foam (n = 77) or gel (n = 82). More patients achieved modified (excluding head) PASI 75 with Cal/BD foam than with Cal/BD gel after 4 (40.3% vs 17.1%; p = 0.001), 8 (53.2% vs 22%; p < 0.0001) and 12 weeks (57.1% vs 35.4%; p = 0.006) and more also achieved a modified PASI 90 at 4 (11.7% vs 2.4%; p = 0.02) and 8 weeks (27.3% vs 8.5%; p = 0.002), but there was no difference at 12 weeks (15.6% vs 12.2%, NS). The overall reduction in body surface area was 50.2% with Cal/BD foam and 39.2% (p = 0.04) with Cal/BD gel at week 12. Treatment success rates (patients clear/almost clear of psoriasis with a ≥2 grade improvement according to Physician’s Global Assessment [PGA]) were higher with Cal/BD foam than the Cal/BD gel at week 8 (35.6% vs 16.9%; p = 0.009), and more Cal/BD foam patients achieved a Dermatology Life Quality Index (DLQI) score of 0/1 at 4 (33.8% vs 14.1%; p = 0.004) and 12 (55.7% vs 29.3%; p = 0.001) weeks.

Psoriasis: Psoriasis Area and Severity Index (PASI)

Psoriatic Arthritis: Subcutaneous injection. 45mg at Weeks 0 and 4, then every 12 weeks. Alternatively, in patients weighing >100 kg, 90 mg at Weeks 0 and 4, then every 12 weeks. If inadequate response, consider treatment every 8 weeks. Continue if no response after 28 weeks.

Psoriasis: Single initial intravenous tiered dose based on body weight using STELARA 130 mg vial (weight ≤ 55 kg = 260 mg [2 vials]; weight > 55 kg to ≤ 85 kg = 300 mg [2 vials]; weight > 85 kg = 520 mg [4 vials]). Then subcutaneous injection. 90 mg 8 weeks after the intravenous dose, then every 8 weeks. Consider treatment every 4 weeks for patients with severe disease.

Cytokines: In patients receiving anti-TNF therapy, NETs may be generated. Avoid concomitant use of STELARA with anti-TNF therapies.

Stelara® (ustekinumab) is a monoclonal antibody that blocks the p40 subunit of IL-12 and IL-23. STELARA is indicated for:

**Psoriasis**
- Moderate to severe plaque psoriasis in adults who are candidates for photo- or systemic therapy; signs and symptoms of active psoriatic arthritis in adults who have had an inadequate response to previous non-biological DMARD therapy; and severe active Crohn’s disease in adults who have had an inadequate response, lost response, or were intolerant to either conventional therapy or a TNF antagonist or have medical contraindications to such therapies.

**Psoriatic Arthritis**
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**Cytokines**
- In patients receiving anti-TNF therapy, NETs may be generated. Avoid concomitant use of STELARA with anti-TNF therapies.

**Planning and Administration**
- STELARA is administered as a subcutaneous injection. Store at 2°C – 8°C. Refrigerate. Do not freeze or shake. Protect from light by storing in original carton.

**Product Information**

**ADVERSE EFFECTS**
- Common: injection site pain, injection site erythema, injection site pruritus, fatigue, back pain, myalgia, arthralgia, nasopharyngitis, headache, rhinitis, pharyngitis, skin infections, respiratory infections, nasopharyngeal pain, diarrhea, nausea, vomiting, rash, pruritus, back pain, myalgia, arthralgia, fatigue, injection site erythema, injection site pain, injection site pruritus, injection site edema, injection site redness, injection site induration, injection site swelling, pain, injection site discomfort, injection site warmth, injection site induration.

**Serious Adverse Events**
- Serious skin conditions: STELARA may increase risk of infections and reactivate latent infections. Serious infectious, fungal and viral infections have been observed. Use with caution in patients with chronic or recurrent infections.

**Immunosuppression**
- Use with caution in patients with known malignancy or history of malignancies. Malignancies have been observed. Use with caution in patients with known malignancy or history of malignancies. Patients should be monitored for the appearance of non-melanoma skin cancer. Hypersensitivity reactions: Discontinue immediately if serious hypersensitivity reactions including anaphylaxis and angioedema occurs.

**Adverse Events**
- See full PI for other adverse effects.

**DISCONTINUATION**
- Discontinue STELARA if serious hypersensitivity reactions including anaphylaxis and angioedema occurs.

**Immunisations**
- Do not give live bacterial or viral vaccines. Consider secondary transmission of live vaccines from contacts.

**Hypersensitivity Reactions**
- Consider discontinuing if no evidence of benefit by Week 16.

**CONTRAINDICATIONS**
- Severe hypersensitivity to ustekinumab or to any of the excipients. Do not administer to patients with a clinically important active infection.

**PRECAUTIONS**
- Do not administer to patients with a clinically important active infection.

**REFERENCES**

**Date of preparation:** 8 March 2017

**PBS Information:** Authority Required. Refer to the PBS Schedule for full details.
Continuous dosing versus interrupted therapy with ixekizumab: an integrated analysis of two phase 3 trials in psoriasis

Authors: Blauvelt A et al.

Summary: This analysis of data from the UNCOVER-1 and UNCOVER-2 randomised, placebo-controlled, phase III studies of ixekizumab, examined outcomes in patients receiving continuous (ixekizumab every 2 or 4 weeks; n = 416) versus interrupted (ixekizumab switched for placebo at week 12 and then retreated for 24 weeks after disease relapse; n = 402) ixekizumab therapy. After 60 weeks, continuously treated patients maintained high PASI 75 (90.0%) and static PGA (sPGA) 0 or 1 (81.9%) responses. In interrupted therapy patients initially receiving ixekizumab every 2 or 4 weeks, PASI 75 (87.0% and 95.1%) and sPGA 0 or 1 (70.7% and 82.3%) scores were recaptured after 24 weeks of retreatment.

Comment: The standard question amongst users of biologics is how these drugs perform when treatment is interrupted. I have a number of patients return to their home countries and are away from Australia for prolonged periods of time so need to come off their biologic. Additionally patients requiring orthopaedic surgery, pregnancy or even cancer treatments are becoming more numerous in my practice. This article looks at 1226 patients who were treated with ixekizumab who recorded a sPGA 0 or 1 at week 12 and then entered a maintenance phase in these particular studies. Amongst these, 82-83% of patients had a sPGA >3 by week 60. The medium time to relapse is approximately 20 weeks irrespective of the induction dosage. After 24 weeks of re-treatment at monthly intervals, 87% to 95% had recaptured PASI 75 and 70% to 82.3% had recaptured sPGA 0 or 1. This is an article that has answered some of those clinical questions that come up in practice and is worthy of a detailed read by regular biologic users.


The impact of age on psoriasis health care in Germany

Authors: Trettel A et al.

Summary: This analysis of data from the German psoriasis registry PsOBest in adult patients with moderate-to-severe psoriasis or psoriatic arthritis (n = 3615) sought to identify disparities in psoriasis characteristics by age and the impact on psoriasis care. The majority of patients were 35-64 (65.7%) years of age, followed by 18-34 year olds (21.4%) and those aged 65+ years (12.8%). The most frequent form (89.8%) of the condition was psoriasis vulgaris. Only the erythrodermic psoriasis form of the disease differed between age groups being more frequent in the elderly than in patients aged 35-64 years (1.9%; p ≤ 0.048). Nail psoriasis occurred more often in patients aged 35-64 years (55.5% vs 43.6% for 18-34 years and 44.5% for 65+ years; p ≤ 0.001). Psoriatic arthritis was less frequent in 18-34 year olds (9.5%) vs 22% for 35-64 years and 17% for 65+ years; p = 0.001) and this group had the highest rate of scalp psoriasis (85.8% vs 78% for 35-64 years and 77% for 65+ years; p ≤ 0.001). Biological use was lower in 18-34 year olds (16.2%) vs 35-64 year olds (23.9%, p ≤ 0.001) and those aged 65+ years (21.8%; p = 0.042).

Comment: This article reviews 3615 patients from the German psoriasis registry which records patients with moderate-to-severe cutaneous psoriasis or psoriatic arthritis on systemic therapy. These patients had been recruited over a 10-year time period. The appearance of psoriatic forms did not differentiate significantly between the various age groups. The exception was erythrodermic psoriasis, which presented more frequently in the elderly. Nail psoriasis was significantly more often seen in the 35-64 year age group. This group also showed the highest rate of scalp psoriasis (85.8% vs 78% for 35-64 years and 77% for 65+ years; p ≤ 0.001). Biological use was lower in 18–34 year olds (16.2%) vs 35-64 year olds (23.9%, p ≤ 0.001) and those aged 65+ years (21.8%; p = 0.042).


Efficacy and safety of interleukin-17 antagonists in patients with plaque psoriasis: a meta-analysis from phase 3 randomised controlled trials

Authors: Wu D et al.

Summary: This meta-analysis of nine randomised controlled trials was conducted to evaluate the use of interleukin-17 (IL-17) cytokine pathway antagonists in 5951 psoriasis patients. Compared to placebo recipients, recipients of IL-17 antagonists achieved higher PASI 75, PASI 90, and PASI 100 response rates and better DLQI 0 or 1 response rates. They also had a lower incidence of discontinuations for lack of efficacy. There were no differences in the proportions of patients with serious adverse events, cardiovascular disease or discontinuations because of adverse events. IL-17 antagonists were associated with a higher proportion of patients with any adverse event or infections.

Comment: A study out of China publishing a meta-analysis of IL-17 antagonists in the treatment of psoriasis patients. Nine randomised controlled trials with a total of 5951 patients were included in the data reviewed. The IL-17a are an excellent biological therapy for psoriasis. The PASI responses obtained were high and the DLQI responses were also high. This treatment group displayed a lower incidence of drug discontinuations due to lack of efficacy. Important data in this review of safety analysis was that no significant differences were found between the IL-17 antagonists and placebo in the proportion of patients with serious adverse events. Also, no differences in cardiovascular disease or discontinuations due to adverse events were seen. There were however a high proportion of patients in the treatment groups with any adverse events, especially infections. This article sort of tells us what we know but gives us bigger numbers and we can have a little more security in this more recent group of medications at our disposal.


Comparison of phenotype, comorbidities, therapy and adverse events between psoriatic patients with and without psoriatic arthritis. Biobadaderm registry

Authors: Pérez-Plaza A et al.

Summary: This analysis of data from a prospective inception cohort of psoriasis patients on systemic therapy held in the Biobadaderm registry was conducted to generate a comparative analysis of psoriasis patients with (n = 249) and without (n = 1871) psoriatic arthritis focused on phenotype, baseline comorbidities, therapeutic profile and adverse events. Over a follow-up of 762 patient-years, patients with psoriatic arthritis had more comorbidities (especially hypertension and liver disease), a higher number of systemic therapies (especially anti-TNF-α and combination therapy) and experienced more adverse events (adjusted incidence rate ratio [aIRR] 1.29; 95% CI 1.05-1.58) than those without psoriatic arthritis (follow up 5020 patient-years). The rates of serious adverse events (aIRR 1.51; 95% CI 1.01-2.26) and infections/infestations (aIRR 1.88; 95% CI 1.27-2.79) were notably higher in patients with psoriatic arthritis.

Comment: A study out of Spain looking at the Biobadaderm registry. They looked at 2120 patients, 1871 (88%) had psoriasis without arthritis and 249 (12%) psoriasis with arthritis. The follow-up times were 5020 patient-years in the psoriasis group and 762 patient-years in the arthritis group. Patients with psoriatic arthritis had more comorbidities particularly hypertension and liver disease. They used a higher number of systemic therapies and were also more likely to be treated with anti-TNF-α drugs and combination therapy. Patients with psoriatic arthritis presented with more adverse events particularly serious adverse events. Infections were also increased. These findings were independent of the associated comorbidities and present dermatologic therapies. In conclusion, psoriatic arthritis patients always have more medical issues and require closer monitoring.


Comment:

This is an article that has answered some of those clinical questions that come up in practice and is worthy of a detailed read by regular biologic users.