A RESEARCH REVIEW™
SPEAKER SERIES

# Psoriasis Update

Making Education Easy 2021

## About the speaker

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Dr Juber Hafiji is a specialist dermatologist and Mohs micrographic and reconstructive surgeon based in the Hawke's Bay. After finishing his general medical training, he completed his specialist dermatology training in Cambridge University Hospital (UK).

Dr Hafiji has regularly lectured nationally in the UK for the British Association of Dermatologists, British Society for Dermatological Surgery, and the British Medical Journal (BMJ). He has written book chapters for the BMJ and contributed to National BMJ Dermatology Masterclass events. He is now a Co-Editor for the educational journal of the British Association of Dermatologists, Clinical and Experimental Dermatology (UK).

Juber moved to New Zealand in early 2020 and is the Clinical Lead, Department of Dermatology, at Hawke's Bay District Health Board and he also consults in private practice in Napier.

**Abbreviations used in this review**
**ASO** = Anti-streptolysin O
**BMI** = body mass index
**CV** = cardiovascular
**DVT** = deep vein thrombosis
**HbA1c** = haemoglobin A1c
**IBD** = inflammatory bowel disease
**IL** = interleukin
**QoL** = quality of life
**SARS-CoV-2** = severe acute respiratory syndrome coronavirus 2
**TCI** = topical calcineurin inhibitor
**TNF** = tumour necrosis factor



This review summarises the highlights of a presentation on psoriasis management by dermatologist Dr Juber Hafiji for general practitioners in the Hawke's Bay region. This July 2021 meeting was supported by Novartis, AbbVie and Leo Pharma and this publication has been created with funding from Leo Pharma.

## Introduction

Psoriasis is an under-treated condition.[1] A survey from the United States found that 59% of 1.7 million people with moderate to severe psoriasis were untreated in the previous year.[2] Another study found that < 60% of patients with psoriasis as their sole diagnosis were seen by a healthcare provider in the previous year.[3]

Managing psoriasis in primary care can be problematic, with a survey of 147 primary care providers indicating that:[4]

- 80% felt psoriasis was difficult to treat.
- 63% agreed that psoriasis affected QoL.
- 66% hesitated to prescribe high-potency topical corticosteroids.
- 82% cited access to a dermatologist as a major barrier to care.
- 70% wanted to learn more about psoriasis from a dermatologist.

Psoriasis is a chronic, inflammatory skin disease with several subtypes (**Table 1**). The condition may develop at any age, however, there is a bimodal peak in incidence at ages 20-30 and 50-60. Caucasian people tend to be more affected by psoriasis than dark-skinned peoples.

Psoriasis is a complex, T-cell mediated, autoimmune disease, with a genetic component in approximately 30% of cases. Some of the immune factors and cytokines involved in the pathophysiology of psoriasis are used as treatment targets including IL 1, IL 12, IL 17, IL 23 and TNF-α.

### Types of psoriasis

Psoriasis is diagnosed clinically, although biopsy is occasionally necessary to distinguish between psoriasis subtypes, and/or to rule-out concomitant conditions and guide treatment decisions.

### Exacerbating factors

Psoriasis can be aggravated by:

- Stress
- Stopping oral corticosteroids
- Trauma (koebnerisation)
- Medicines
- Infection
- Sunlight in 10% of cases

### Psoriasis is a multisystem disease

There is a plethora of evidence demonstrating that people with psoriasis have an increased risk of CV disease and cerebrovascular disease. This is due to the systemic inflammation associated with psoriasis resulting in atherosclerosis. There is also a correlation between psoriasis severity and the patient's degree of CV risk.

An unhealthy lifestyle increases the risk of developing psoriasis and can increase the severity of the disease. Patients who undergo positive behavioural change can achieve better disease control.

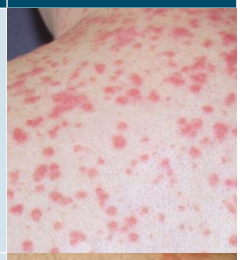
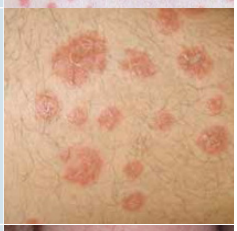
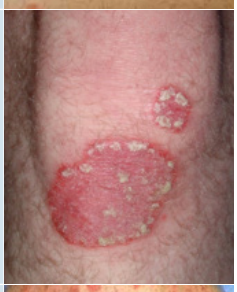
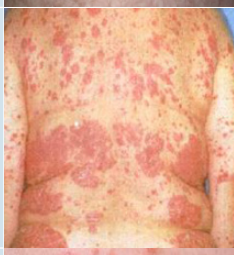
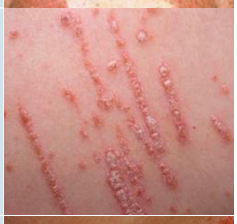
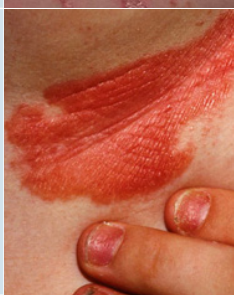
A study of 303 patients with psoriasis who were overweight or obese found that a dietary intervention, combined with increased physical exercise, reduced active psoriasis severity.[5] The effectiveness of psoriasis treatments are also likely to be improved by achieving positive lifestyle changes.

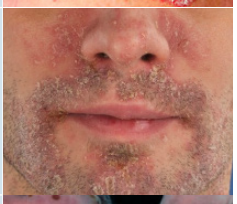
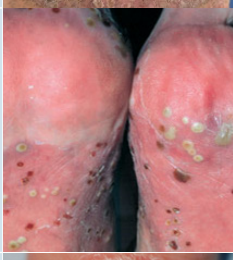
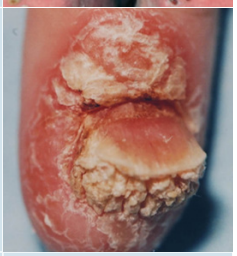
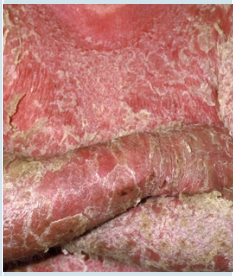
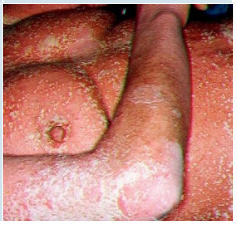
Current or former smokers have an increased risk of psoriasis and smoking is associated with greater psoriasis severity.[6] Furthermore, patients with psoriasis are more likely to be current smokers, compared to people without psoriasis.[6] Public health initiatives that decrease the prevalence of smoking, may decrease the prevalence of psoriasis. Primary care can use the potential of improved psoriasis control as an incentive to encourage smoking cessation.

Psychological stress appears to play a role in exacerbating psoriasis.[7] Patients with psoriasis may also have an altered stress response that contributes to the condition. A small study found that patients with psoriasis had a heightened cortisol response compared with healthy controls or people with rheumatoid arthritis.[8]

As psoriasis is a T-cell mediated condition, patients with psoriasis have an increased risk of developing other inflammatory conditions such as IBD, uveitis, arthritis, Coeliac disease, metabolic syndrome, lymphoma, and DVT.

**Table 1**: Subtypes of psoriasis

| Subtype | Description | Example |
|---|---|---|
| **Guttate** | • Post streptococcal infection, often in a young person<br>• Small, droplet-shaped lesions<br>• Self-limiting after several months<br>• Patients with a family history of psoriasis are more likely to develop chronic psoriasis |  |
| **Small plaque** | • Lesions < 3 cm (larger than guttate) |  |
| **Chronic plaque** | • Typical presentation of psoriasis<br>• Salmon pink patches with silvery scale<br>• Onset later in age<br>• Plaques > 3 cm<br>• Often affecting extensor regions (elbows, knees, and lower back) |  |
| **Unstable plaque** | • Rapid extension of stable plaques<br>• Induced by infection, stress, medicines, e.g. Li+, β-blockers, hydroxychloroquine, or medicine withdrawal, e.g. corticosteroids. |  |
| **Koebnerisation** | • Gravitation of psoriasis to trauma sites<br>• Occurs in other skin conditions<br>• Usually linear |  |
| **Flexural** | • Not typical of other subtypes<br>• Small, shiny patches in intertriginous areas<br>• May have concomitant infection with candida that needs to be treated or excluded<br>• Treatment with a TCI may be appropriate |  |

| Subtype | Description | Example |
|---|---|---|
| **Scalp** | • Usually occurs in isolation<br>• Difficult for patients to treat<br>• Systemic treatments often preferable |  |
| **Sebopsoriasis** | • May overlap with seborrhoeic dermatitis caused by Malassezia<br>• Often affects face, scalp, ears, and chest |  |
| **Palmoplantar** | • Painful fissures cause functional disability<br>• Monomorphic, sterile, haemorrhagic pustules<br>• Low threshold for systemic treatment<br>• Often occurs in smokers and is exacerbated by nicotine |  |
| **Nail disease** | • Causes aesthetic and functional issues<br>• Systemic treatments are often more successful than topical interventions |  |
| **Erythrodermic** | • Rare<br>• ≥ 90% of body area appears red<br>• Acute and chronic need to be distinguished<br>• Chronic erythroderma is a physiological adaption that is not usually life threatening<br>• Acute erythroderma occurs over 24-48 hours, usually requires hospitalisation, and is associated with haemodynamic compromise |  |
| **Generalised pustular** | • Rare<br>• Requires hospitalisation<br>• 10% have a history of psoriasis<br>• Typically caused by steroid withdrawal, medicines or infection |  |

## Assessment

There are several tools that can be used to assess psoriasis in secondary care:

- Physician's Global Assessment (PGA) is increasingly preferred
- Body Surface Area (BSA)
- Psoriasis Area Severity Index (PASI)
- Dermatology Life Quality Index (DLQI), useful for assessing the impact on the individual, as this may not match the disease severity

In general, 60% of patients recently diagnosed with psoriasis have mild disease, 30% have moderate disease, and 10% are severe. Patients with moderate or severe disease are likely to benefit from referral to secondary care.

## Treatment

Coal tar has been used since the 1800s to treat psoriasis. Topical corticosteroids were introduced in the 1950s, and systemic treatments and phototherapy became available in the 1960s-70s.

In general, there is a lack of long-term efficacy and safety data supporting the use of topical treatments for psoriasis. Topical corticosteroids are effective when they are used for up to 8 weeks. There has been no clear difference demonstrated between the once daily or twice daily use of topical corticosteroids. Although coal tar and retinoids are recognised treatments for the management of psoriasis, there is little evidence supporting their use in the literature.

Phototherapy is an effective treatment option for psoriasis and other inflammatory conditions, however, accessing treatment can be a problem for some patients.

Dr Hafiji recommends lifestyle change as the first-line approach to psoriasis management, e.g. smoking cessation, improved diet, increased exercise, and stress reduction. This approach can also improve the efficacy of any pharmacological interventions. Psoriasis can be an effective initiator of lifestyle change, as patients are often highly motivated to improve the condition of their skin. In Dr Hafiji's experience, this message is most effective when it is delivered at the first consultation.

## The PSO-LONG trial

The PSO-LONG trial validated the proactive management of psoriasis with the twice weekly application of the fixed dose topical 50 µg/g calcipotriol and 500 µg/g betamethasone dipropionate foam. In 251 patients who completed the trial, following 4 weeks of daily treatment, patients in the proactive (weekend treatment) group experienced 41 more days in remission per year, compared to patients in the reactive group (**Figure 1**; $P<0.001$).[9] The proactive treatment approach was well tolerated with minimal adverse effects. Proactive treatment is effective because, although the skin may appear clear during remission, the underlying immunological pathophysiology remains, which proactive treatment helps to control.

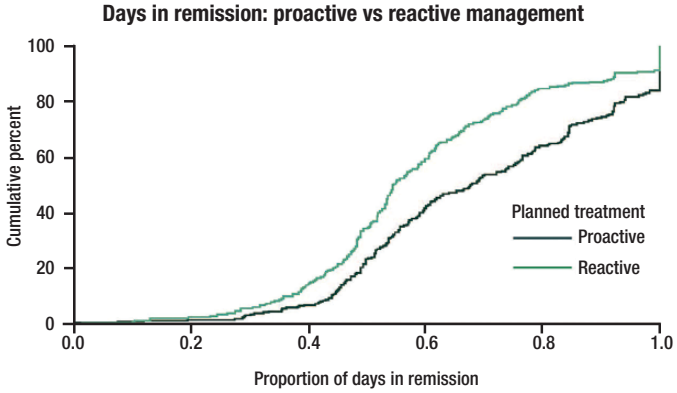



**Figure 1**: Cumulative proportion of days in remission during maintenance treatment with proactive or reactive management ($P<0.001$) adapted from Lebwohl *et al* (2021)[9]

Dr Hafiji recommends Enstilar® (betamethasone dipropionate with calcipotriol) foam as an effective treatment for psoriasis. This product is popular with patients as it is easy to apply, non-greasy and has a cooling effect on the skin. Enstilar has been funded since April, 2020.

## Systemic treatment

Systemic treatments for psoriasis involve conventional immunosuppressive medicines, i.e. methotrexate, cyclosporin, acitretin, and less frequently unconventional treatments, i.e. mycophenolate, hydroxurea, azathioprine. Oral corticosteroids can potentially cause psoriasis to destabilise and are not a recommended treatment option for psoriasis.

Biologics have revolutionised the treatment of psoriasis. In New Zealand, the TNF-α inhibitors etanercept (Etacept®), adalimumab (Humira®), infliximab (Remicade®), and the IL-17 antagonist secukinumab (Cosentyx®), are available for the management of psoriasis.

Dr Hafiji recommends using biologics for the treatment of moderate-to-severe psoriasis that is not responding to conventional systemic immunosuppressive medicines, due to the life-changing effect they can have for patients. These medicines are generally well-tolerated with minimal adverse effects, due to the targeted nature of treatment. Biologics reduce a patient's reliance on topical medicines, and TNF-α inhibitors have been shown to decrease CV risk in patients with psoriasis.

# Management in primary care

Categorising psoriasis can help guide management decisions. For example, a low referral threshold is recommended for children presenting with psoriasis. The acute onset of symptoms is a red-flag and hospitalisation may be appropriate, particularly if the patient is systemically unwell. Additional factors to consider include small versus large plaques, localised or generalised psoriasis, and the thickness of the plaques.

The social, mental, and financial effect of psoriasis on the patient should also be considered. Careful questioning may be required as patients may not disclose psoriasis affecting sensitive anatomical sites. The key is to offer patients hope at the first consultation and prevent them from feeling disillusioned.

Before deciding on (or switching) a treatment regimen, ask the patient what products they have been using, how much they have been using, whether they have found treatment effective and tolerable, and how compliant they have been with treatment. The patient should be examined for areas of skin that are difficult to access, and for the presence of psoriatic arthropathy and other co-morbidities that may coexist with psoriasis, e.g. IBD.

Validated psoriasis patient questionnaires that are appropriate for primary care and provide an insight into the impact on the patient, include:

- Psoriasis Epidemiology Screening Tool (PEST)
- Psoriatic Arthritis Screening and Evaluation (PASE)
- Toronto Psoriatic Arthritis Screen II (ToPAS)

## Investigations

Testing of patients with suspected psoriasis includes skin scrapings for mycology (especially for flexural disease), skin swabs for mycology, and throat swab and ASO blood titre for suspected guttate psoriasis. A patient with guttate psoriasis who has had ≥ 3 streptococcal infections in a year should be considered for a tonsillectomy, particularly if they have a family history of psoriasis, to reduce the risk of transformation to chronic plaque psoriasis.

Resources for patients living with psoriasis are available from: http://www.dermnet.nz/, www.healthnavigator.org.nz/health-a-z/p/psoriasis/, https://mypsoriasis.co.nz/, and pharmaceutical companies producing biological medicines for psoriasis also have support services.

## Treating psoriasis

Treatment choices for topical medicines for psoriasis are guided by:

- Anatomy, e.g. super potent topical corticosteroids are generally not appropriate in flexural areas.
- Disease severity.
- Patient preference, as compliance is likely to be low if the patient does not like the product.

Treatment should be reviewed regularly, e.g. every four weeks. Sufficient quantities of topical treatments should be prescribed to discourage undertreatment. Topical corticosteroids should be withdrawn gradually to prevent rebound flares, e.g. once daily, to once every second day. Super potent topical steroids should not be used for more than 8 weeks at a time, due to the risk of skin atrophy.

Prescribe the following triad in sufficient quantities to prevent dry skin:

1. Emollient
2. Soap substitute
3. Bath/shower emollient

It is also important to remember that erythroderma can be difficult to assess in patients with dark skin.

Action points for managing psoriasis include:

- Optimising the CV risk of patients
- Performing an annual check of BMI, blood pressure, lipids and HbA1c
- Screening patients with psoriasis for depression
- Explaining the risk of DVT

Dr Hafiji recommends referring to secondary care when:

- The diagnosis is uncertain
- The condition is severe, i.e. < 10% of cases
- In emergency situations, e.g. pustular psoriasis, erythrodermic psoriasis
- Acute guttate is diagnosed
- Patients have nail or joint disease
- Children have psoriasis

## Performing practice audits

Practices can audit their records to determine how many patients have psoriasis. More detailed analysis of the patient records can determine if emollients are being prescribed in sufficient quantities, how long patients are using potent steroids for, and if the prescribing is appropriate for the patient's condition. The CV management of patients can also be monitored, e.g. is lifestyle advice being provided, and are CV risk assessments being performed?

# Research update

A retrospective Canadian study including 176,858 patients with psoriasis and 15,430 patients with psoriatic arthritis found the most frequent causes of death from 1996-2016 were cancer, CV disease, and respiratory conditions.[10] The standardised excess mortality rates, per 1,000 population, were 1.44 for patients with psoriasis and 2.43 for patients with psoriatic arthritis.[10]

Guidelines from 2021 provide five key messages for patients with psoriasis in relation to potential SAR-COV-2 infection:[11]

1. The risk of being infected by the SAR-COV-2 virus is not increased in patients with psoriasis.
2. Systemic and biologic medicines for psoriasis have little effect on the risk of SAR-COV-2 infection or infection outcomes.
3. Telemedicine is an effective method for managing psoriasis and psoriasis-related conditions for patients isolating at home.
4. Vaccination against SAR-COV-2 is essential and all psoriasis treatments should continue as normal.
5. Shared decision making is recommended to determine if systemic or biologic medicines should be continued in patients who are SAR-COV-2 positive. For example, a risk-benefit analysis might suggest halting a biologic for nail disease, whereas a patient with a history of pustular psoriasis might continue taking a biologic.

# Question and answers

Dr Hafiji provided the following answers to questions from the audience:

**1. Is Enstilar® funded?**
Enstilar® cutaneous foam is fully funded in New Zealand. Dr Hafiji has been using this product for many years in the United Kingdom. He has found that patients prefer this product because it is non-greasy, easy to apply, effective, and can be used proactively to control psoriasis. Dr Hafiji recommends prescribing Enstilar® in sufficient quantities to prevent patients from running out.

**2. A patient requires a non-greasy topical medicine for scalp psoriasis, can Enstilar® be used on the scalp or is systemic treatment required?**
Dr Hafiji recommends that Enstilar® be used on the scalp, although it should be sprayed on the fingers and massaged into the scalp, rather than sprayed onto the hair. If patients will tolerate it, Dr Hafiji recommends Coco-scalp® applied overnight, for scalp psoriasis, which is washed off with Nizoral® or another type of keratolytic shampoo. In the morning, apply Daivobet® gel or Enstilar® foam. This approach may have to be modified, however, according to patient tolerance.

**3. Drug-induced psoriasis typically begins how long after initiating a medicine, and if the medicine is withdrawn, is the psoriasis likely to resolve?**
The destabilisation of inflammatory psoriasis generally occurs within 7-21 days of initiating a new medicine. Patients may present sometime after this, making the patient history very important. Drug-induced psoriasis should be expected to resolve once the medicine is withdrawn, because the antigenic drive of the medication causing psoriasis has been removed. Drug-induced destabilisation of psoriasis is likely be a class effect, e.g. a patient sensitive to one β-blocker is likely to be affected by other β-blockers.

**4. Does the systemic treatment of psoriasis reduce the systemic manifestations of psoriasis?**
Yes - there is evidence that biologics reduce the wider inflammation associated with psoriasis. Biologic treatment may reduce the increased CV risk associated with psoriasis by reducing atherosclerosis.

**5. Dr Hafiji was asked to expand upon the treatment of guttate psoriasis.**
Guttate psoriasis typically occurs in a younger person, usually without a pre-existing history of skin problems, and following a throat infection. Approximately 20-30% of patients with guttate psoriasis who have a family history of psoriasis will transform to chronic plaque psoriasis. A throat swab should be taken, a blood sample tested for ASO titre, and the throat infection treated. Enstilar® is effective for the skin lesions of guttate psoriasis. Phototherapy is also an effective treatment option. Dr Hafiji recommends a tonsillectomy for patients with recurrent streptococcal throat infections triggering guttate psoriasis, particularly if they have a family history of psoriasis, to prevent transformation to chronic plaque psoriasis. Enstilar® is not approved in patients aged under 18 years and phototherapy may be considered in this situation.

## TAKE-HOME MESSAGES

- Psoriasis is a multisystem disease with wide-spread inflammation that can affect nails, joints, the CV system, and other organs.
- Psoriasis has a major impact on the QoL of patients that can cause disillusionment.
- Patients with moderate-to-severe psoriasis should be referred to secondary care early.
- Behavioural and lifestyle modifications in primary care are crucial in the management of psoriasis.

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