



## Set On Soothing Psoriasis

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*Presented at the 76th Annual Dalhousie Refresher Course*

It is estimated that about 26,000 new cases of psoriasis arise in Canada every year, with the average age of onset being 31.

In Canada, psoriasis affects about 700,000 people (about 2% of the population). The condition creates a major psychosocial impact on the affected patient. The age group most affected is 18 to 54. Difficulties in workplace interaction affect 18% of all patients. Fifteen per cent of patients show difficulties concerning socializing with family and friends, while 8% of patients have been excluded from using public facilities, such as swimming pools or spas. Five per cent of patients indicate difficulty in getting a job and, most troublesome of all, 10% of patients have contemplated suicide.

A review of 40,000 patients was carried out in the March 2001 issue of *The Archives of Dermatology* (Table 1). Patients indicated that physicians underestimate the seriousness or repercussions of psoriasis. Depression, frustration, and embarrassment are pervasive in these patients. There is a different patient perception compared with physician perception of the seriousness of the problem. Patient frustration levels are high and alternative therapies are common.

Activities of daily life are affected significantly. Twenty per cent of patients have experienced sleeping difficulties, while 27% suffer

### Andrea's eruption

Andrea, 26, presents with a four-week history of a widespread cutaneous eruption. She has never had this problem before. Two weeks prior to the skin problem, Andrea developed an upper respiratory infection, which as since disappeared.



Andrea, whose only medication is the birth control pill, has a sister with psoriasis.

On physical examination, there is a widespread macular and papular cutaneous eruption on her trunk and extremities. Her scalp is involved, but the palms, soles, and mucous membranes are spared. There are numerous 0.5 cm to 1 cm-sized papules and patches covering the skin. Each lesion has a silvery scale. There are no changes seen in the nails.

**What is the diagnosis? See page 107**

sexual difficulties. Hand use has been difficult in 8% of patients, and 7% of patients have difficulty walking. Sitting for prolonged periods of time is a problem in 7% of patients (*e.g.*, sitting at a computer), and standing for long periods was a complaint in 5% of those surveyed. In general, job duties were difficult to perform in at least 10% of patients.

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Table 1

## National Psoriasis Foundation survey

Part of a recent survey by the National Psoriasis Foundation involved how satisfied participants were with therapy. Patients' responses were:

Very	26%
Fairly	22%
Somewhat	36%
Not at all	36%
Not sure	3%

Patients were also asked to estimate the efficacy of current therapy, and this is summarized as follows:

Very well	22%
Fairly well	32%
Somewhat	36%
Not at all	10%

The take-home message concerning these statistics is clearly that we can do better.

## What causes psoriasis?

First of all, there are different types of psoriasis, including plaque, guttate, pustular, and erythrodermic.

The actual cause of psoriasis is unknown. Genetics determine the predisposition of the type of psoriasis that will develop and environmental



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factors may trigger the condition itself. There is an immune reaction taking place and this is now the focus of the newer therapies.

It seems that the epidermal keratinocyte turns over about seven times the normal rate in patients with psoriasis. New research suggests that it is a message from the T lymphocyte that is a major contributor to the development of psoriasis. Newer therapies focus on this.

## What are the treatments?

In the histology of psoriasis, there is a hyperproliferation and abnormal differentiation of keratinocytes. There is inflammation and a local vascular change.

Currently, topical agents are the mainstay of therapy, and this is reflected in the fact that 87% of patients are using topical creams or ointments (Table 2). Topical corticosteroids are still a first-line agent. It is important to have an approach that includes the knowledge of various potencies of topical corticosteroids. Generally speaking, we like to use medium-strength to low-strength topical corticosteroids because the use of long-term high potency steroids comes with many potential side-effects. Creams are preferred over ointments because they are cosmetically more acceptable. Lotions will be used on the scalp, and pastes can be used in areas where psoriasis is quite thick.

Topical vitamin D derivatives have been used over the past 10 years. Calcipotriol has been proven very effective. It is often used in combination with a topical steroid and is currently available in a combination called Dovobet®. It can be extremely beneficial when used in conjunction with ultraviolet (UV) light therapy.

Tazarotene is a vitamin A topical retinoid. It is available as gel or cream, and has been useful in some patients with psoriasis. It can be used in

Table 2

## Current use of prescription products

Therapy	% of all patients
Topicals (creams, ointments, and lotions)	87%
Phototherapy or light treatment	21%
Oral medications	18%

short contact or may be left on for a more prolonged period.

Anthralin has been available for over 80 years. Anthralin can be used either as a short contact, or on a more prolonged basis. The problem with this product is that it stains the skin and, for that reason, some patients find it less cosmetically acceptable.

Tars have been used alone, as well as in combination with light therapy, for a long time. Their use has become more limited since newer agents have been made available. Tars do still play an important role to play in resistant cases of psoriasis.

The addition of products, such as salicylic acid, to creams or ointments, can also be beneficial.

Combination therapy of calcipotriol and steroids, tazarotene and steroids, anthralin and tar, and salicylic acid and steroids is something that one can implement when other means fail.

Phototherapy has been used to treat psoriasis for a long time. UVB light, UVA light combined with psoralens (PUVA), and narrow band UV light therapy are

## Andrea's diagnosis

Andrea has guttate psoriasis. The differential diagnosis includes:

- Pityriasis rosea
- Secondary Syphilis
- Lichen Planus

The distribution and morphology rule out the latter three entities. The serology is negative and the only lab data which is positive is an elevated ASOT.

The management of guttate psoriasis includes the use of a mild topical corticosteroid cream, such as 1% hydrocortisone, and ultraviolet B light therapy, if it is available.

Andrea responded to the above treatment within two and a half weeks, and was virtually clear at that time.

available in most major centres. These treatments are reserved for patients with very extensive psoriasis, and they come with a side-effect profile that must be reviewed with the patient carefully. Patients receiving UV light therapy must be made aware that there is a higher incidence of skin cancer (basal cell carcinoma, squamous cell carcinoma)



Indicated for the maintenance treatment of asthma in patients where the use of a combination product is appropriate. See Product Monograph for patient selection, warnings, precautions and adverse events.

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ma, and even melanoma) when these treatments are used.

PUVA therapy can be given with the use of pills, or as a bath. Use of PUVA requires constant supervision, and the watchful eye of a trained individual in order to achieve the desired effects.

Oral medications, such as methotrexate, retinoids, and cyclosporine are available to patients.

The medication which has been around the longest is methotrexate.

It is reserved for patients with very extensive psoriasis who fail to respond to topical therapy. Because methotrexate is metabolized in the liver, it is very important that patient monitoring be performed very carefully.

If there is a history of excessive alcohol ingestion, the patient would not be a candidate. A monthly evaluation of liver function would be reasonable, and a variety of blood perimeters, such as a complete blood count, would seem reasonable.

Cyclosporin also has a place in the management of psoriasis. With most physicians, this drug is reserved for patients who fail to respond to other therapies. Close monitoring of renal function is very important in these patients.

Acitretin is available, but patients must be monitored regularly for triglyceride levels while on this medication. Hair loss has been reported. This is not a drug for everyone. Acitretin is teratogenic, and should not be used in patients who can become pregnant.

### What drives psoriasis?

T-lymphocytes drive psoriasis. How this occurs, however, is not accurately known. It appears that the keratinocyte and endothelial cell proliferation are secondary phenomenon.

The direction of therapy is aimed at the major cells that are involved. Thus, the newer therapies (biological therapies) are aimed at T-lymphocytes and cytokines. Psoriasis is a major source of

research interest because it is a T-cell disease with easy access and easy monitoring. For years, we have been targeting the keratinocyte with the use of topical corticosteroids and other agents.

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### What role does genetics play?

One-third of patients with psoriasis have a first-degree relative with psoriasis. If both parents are affected with psoriasis, there is a 65% chance that it will develop in their child. It is thought that gene therapy is unlikely, but it may identify patients most likely to respond to therapy.

### What are the trigger factors?

All of us who treat psoriasis know that stress is a trigger in many patients with psoriasis. A preceding history of streptococcal infection, as illustrated in the case presentation, may also trigger the condition. Alcohol can be a contributing factor, and it has recently been found that smoking, can trigger the condition, especially in pustular psoriasis. Trauma to the skin

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(the Koebner phenomenon) is well-known in psoriasis.

Some drugs have been known to trigger psoriasis, including lithium and beta blockers.

Other drugs that can be implicated in psoriasis include angiotensin-converting enzyme inhibitors, non-steroidal anti-inflammatories, iodine, digoxin, and clonidine.

### What are the breakthroughs?

This is a very exciting time for the research and treatment of psoriasis. Immunotherapy targeting the lymphocyte is very encouraging. Antitumour necrosis factor alpha (TNF) therapy is very exciting. Drugs (such as alefacept) and TNF blockers (such as infliximab and etanercept) are showing great promise. Patients with extensive disease are showing amazing responses to these new drugs. It's important for physicians to make these patients aware that clinical trials are available, and patients can be involved in the trials if they wish to be.

Apart from research breakthroughs and immunotherapy, there are ongoing projects that involve lasers and photodynamic therapy which may help our psoriasis patients.

### In closing ...

It is important to keep in mind that suboptimal disease management in psoriasis and high relapse rates of the condition contribute and add to patient frustration. A better understanding and communication between psoriasis patients and physicians will improve clinical outcomes. CME

## Take-home message



### Quick statistics concerning psoriasis:

- There are about 26,000 new cases of psoriasis in Canada every year.
- The average age of onset is 31.
- About 2% of the Canadian population is affected by psoriasis.
- Suicide has been contemplated by 10% of patients.
- At least 10% of patients have difficulties performing duties at work.

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## Net Readings

1. The National Psoriasis Foundation:  
[www.psoriasis.org](http://www.psoriasis.org)
2. Psoriasis Society of Canada:  
[www.psoriasisociety.org](http://www.psoriasisociety.org)