

IN BRIEF A Summary of the Evidence

Tacrolimus for the Treatment of Adults With Psoriasis or Vitiligo: A Review

Key Messages

- For the treatment of psoriasis in adults:
 - Tacrolimus appears to be effective.
 - Topical tacrolimus appears to be as effective as topical calcipotriol for chronic plaque psoriasis and more effective than topical pine tar for head and face plaque psoriasis.
 - It is unclear if any adverse events are associated with topical tacrolimus.
- For the treatment of vitiligo in adults:
 - Tacrolimus appears to be effective.
 - Tacrolimus appears to be no more effective for re-pigmentation than topical pimecrolimus or topical mometasone furoate (specifically in adult patients).
 - After six months of treatment, topical tacrolimus appears to be no more effective for re-pigmentation than excimer laser or than tacrolimus in combination with excimer laser (based on a study of patients of any age).
 - After skin has been successfully re-pigmented, tacrolimus may be effective for preventing the subsequent loss of pigmentation.
 - Tacrolimus is considered safe, but may cause some adverse effects such as burning sensations, facial flushing, soreness, pruritus (itchiness), and erythema (redness of the skin); however, it appears to cause fewer adverse effects than topical mometasone furoate.
- These conclusions are based on limited evidence.
- No evidence on the cost-effectiveness of tacrolimus for psoriasis or vitiligo in adults was identified.

Context

Psoriasis is a chronic inflammatory skin condition. The most common type of the disease is chronic plaque psoriasis, which is typically characterized by thick, raised, red, scaly patches of skin. Patients with psoriasis are at a higher risk of developing psoriatic arthritis and cardiovascular disease, and the condition can negatively impact self-esteem and quality of life. Although there is currently no cure for psoriasis, the available treatment options have been shown to be effective for managing mild forms of the disease.

Vitiligo is a skin condition characterized by patchy skin depigmentation caused when melanocytes stop producing the melanin that gives skin its colour. It can also affect the hair follicles, causing hair to turn white. It is unclear why the melanocytes stop producing melanin, but it is thought to be the result of an autoimmune reaction destroying the melanocytes. Patients with the most common type of vitiligo — generalized vitiligo — have depigmented patches in a fairly symmetrical pattern on the body. Patients with the less common segmental vitiligo have patches only on one side of the body. Like psoriasis, vitiligo has a negative impact on patients' self-esteem and quality of life, and treatments for vitiligo are frequently ineffective or, if effective, the effect often does not last.

Technology

Tacrolimus is a calcineurin inhibitor that suppresses the immune system. Topical tacrolimus is currently approved for use in the treatment of atopic dermatitis (eczema) and is increasingly being studied for other indications. It is absorbed by the affected skin and is well tolerated.

Issue

A review of the clinical and cost-effectiveness of tacrolimus for the management of psoriasis and vitiligo in adult patients will help to guide treatment decisions.

Methods

A limited literature search was conducted of key resources, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined selection criteria (population, intervention, comparator, outcomes, and study designs).

Results

The literature search identified 231 citations, of which 28 were deemed potentially relevant. An additional three articles were identified from the grey literature. Of these 31 articles, seven met the criteria for inclusion in this review – three systematic reviews, one systematic review with meta-analysis, two randomized controlled trials, and one retrospective comparative study.

Read more about CADTH and its review of tacrolimus for the treatment of adults with psoriasis or vitiligo at:



cadth.ca/tacrolimus-treatment-adults-psoriasis-or-vitiligo-review-clinical-and-cost-effectiveness-0

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