Can Topical Corticosteroids Prevent the Relapse of Atopic Dermatitis?

Introduction:
• Atopic dermatitis (AD) is a chronic, relapsing disease, often seen in pediatric patients, triggered by a combination of factors (genetics, the environment, skin barrier dysfunctions (even in normal uninvolved skin), and immunologic responses).
• There is currently no standard management plan for the long-term management of AD.
• The purpose of this study was to review the existing literature to determine how AD is managed long-term. A comprehensive systematic review published in 2007 found that most practitioners use one or two approaches for treating AD.
  1. A potent topical corticosteroid (TCS) followed by a lower potency preparation as the condition improves.
  2. A short course of topical corticosteroids followed by a maintenance regimen of emollients.
• Recently, topical immunomodulators (TIMs) or topical calcineurin inhibitors (TCIs) have become available for AD management.

Long-Term Intermittent Use of Topical Corticosteroids
• Topical corticosteroids are the standard of care for AD. They are commonly used for short-term (up to 4 weeks) control of an acute flare.
• Two topical corticosteroids have been shown to be efficacious and well tolerated for intermittent long-term therapy.
• Fluticasone propionate (FP) (clobetasol) has been the most extensively studied TCS and has been shown to be effective as an immunomodulatory therapy to control moderate-severe AD (see Table 2).
• Fluticasone propionate is one of the newer corticosteroids that has low systemic bioavailability and a low potential to produce side-effects.
• Fluticasone propionate has been shown to be safe and effective in the treatment of moderate to severe AD when applied either once or twice daily for up to 4 weeks. Studies have shown that topical fluticasone propionate has minimal potential for local or systemic skin thinning.
• Mometasone furoate (MF) (Elocon) has also been examined in open-label studies for maintenance therapy (see Table 3).

Search Criteria:
• The present literature was used to identify the current treatment options for AD for long-term management of AD.
• The literature was examined following a search of MEDLINE and EMBASE databases. Search criteria included articles on AD from January 1, 1991, to the present published in English with human subjects including reviews, report meta-analyses. One additional filter was then placed on the search to identify randomized controlled trials only.
• The search found 3312 papers published on topical corticosteroids of which 201 were randomized controlled trials. Select two papers discussed AD and placebo, twenty-five discussed AD and long-term management and eighteen AD and intermittent therapy.
• Two different long-term therapy options were apparent during the review of the literature, one using topical corticosteroids and the other a combination of topical immunomodulators and topical corticosteroids.
• Interestingly, only two topical corticosteroids have been studied in intermittent long-term maintenance therapy.

Long-Term Intermittent Use of Topical Corticosteroids
• Topical corticosteroids are widely prescribed for the treatment of AD and are considered to be the mainstay of AD management and control. They have been proven to be safe and efficacious in randomized, controlled trials for short-term (2 to 4 weeks) and medium-term (6 months to 1 year) treatment of AD, and especially in the prevention of progression to severe AD.
• The new TNI, tacrolimus, and pimecrolimus have also been proven to be safe and efficacious in randomized, controlled trials for the short to medium term (6 months to 1 year) treatment of AD, especially in the prevention of progression to severe AD.
• Randomized controlled trials demonstrate that two long-term treatment options are viable for managing AD: topically applied corticosteroids and topical tacrolimus.

Discussion
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• The new TNI, tacrolimus, and pimecrolimus have also been proven to be safe and efficacious in randomized, controlled trials for the short to medium term (6 months to 1 year) treatment of AD, especially in the prevention of progression to severe AD.
• Randomized controlled trials demonstrate that two long-term treatment options are viable for managing AD: topically applied corticosteroids and topical tacrolimus.

Conclusions
• The twice-weekly fluticasone propionate maintenance regimen is also preventing recurred relapses of AD and therefore relieves the need for acute intense short courses of daily topical corticosteroids.
• Intermittent fluticasone propionate therapy is a viable option for long-term management of AD.