



HAIR DISORDERS

EFFICACY AND SAFETY OF TOPICAL ADENOSINE FOR ANDROGENETIC ALOPECIA: A SYSTEMATIC REVIEW

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Introduction: Androgenetic alopecia (AGA), also known as pattern hair loss, is the most common type of hair loss in men and women. Due to very limited therapeutic options, search for other effective and safe drugs is necessary.

Objective: This review aims to evaluate the efficacy and safety of a potential treatment option, topical adenosine, for androgenetic alopecia in male and female adults.

Materials and methods: A search of databases (Cochrane Library, Pubmed Medline, and others) was performed with no time limitations placed. We included human interventional studies published in English involving the use of topical adenosine for AGA in healthy adult males and females. Risk bias assessment was then performed using the Cochrane Collaboration criteria.

Results: All four (4) trials in this review, with a total of 260 participants, used 0.75% topical adenosine lotion twice a day for a period of 6-12 months. Comparators were placebo, topical niacinamide, and topical minoxidil. Evaluated parameters include improvement in baldness grading as assessed by dermatologists and investigators, improvement and satisfaction as assessed by participants, anagen growth, thick/thin/vellus hair ratio, and hair density. Two trials found significant improvement with thick hair ratio (>60 or >80 µm) with use of topical adenosine while 2 trials showed higher overall participant satisfaction with topical adenosine. Few to no adverse effects were reported with its use.

Conclusion: Topical adenosine may be effective in increasing thick hair ratio and improving self-perception of hair growth. With minimal to no adverse effects, it may serve as an adjunct or alternative to present treatment options. However, more studies are needed to strengthen these findings.

