

DERMATOLOGY**TOPICAL CORTICOSTEROIDS IN CHILDREN - AN OVERVIEW**

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Abstract: Topical corticosteroids are extensively used in steroid responsive pediatric dermatoses by virtue of anti-inflammatory, antiproliferative and immunosuppressive effects. They are classified into various groups depending on the potency of the molecule. In pediatric age group least potent to mid potent topical corticosteroids are used depending on the age and site. The quantity, duration of application, vehicle and concentration of the molecule determine the outcome of the disease and prevention or reduction of the adverse effects. Vehicles in different forms are used for different anatomical sites. In chronic conditions, when steroids are to be used for longer period of time one has to judiciously taper the potency of the corticosteroid molecule, reduce the frequency of application or change to non-steroidal formulation in order to reduce the adverse effects. There is a need to address the issue of corticosteroid phobia which is quite often observed among physicians and parents.

Keywords: Corticosteroids, Potency, Vehicle, Steroid phobia.

Points to Remember

- *Mild and least potent topical corticosteroids are to be used for infants and mid to moderate potent steroids in children.*
- *Least potent steroids are safe for use in the flexural areas*
- *Desonide or hydrocortisone cream can be used over the face.*
- *Mometasone cream is to be used above two years of age.*
- *Creams to be used over the body and face and ointment over the thick regions like palms and soles*
- *Duration of application is usually for 2 weeks - 4 weeks in case of least potent steroids. Then taper the potency or change to intermittent application as per clinical scenario.*
- *Parents and adolescent patients have to be counselled about compliance to treatment, adverse effects and steroid phobia.*

References

1. Sulzberger MB, Witten VH. The effect of topically applied compound F in selected dermatoses. *J Invest Dermatol.* 1952; 19:101-102.
2. Coondoo A, Phiske M, Verma S, Lahiri K. Side-effects of topical steroids: A long overdue revisit. *Indian Dermatol Online J* 2014; 5:416-425.
3. Gabros S, Nessel TA, Zito PM. Topical Corticosteroids. [Updated 2020 Sep 29]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK532940/> Last accessed on 10 November, 2020.
4. Rathi SK, D'Souza P. Rational and ethical use of topical corticosteroids based on safety and efficacy. *Indian J Dermatol* 2012; 57:251-259.
5. Coondoo A, Chattopadhyay C. Use and abuse of topical corticosteroids in children. *Indian J Pediatr Dermatol* 2014; 15:1-4.
6. Ference JD, Last AR. Choosing Topical Corticosteroids. *Fam Physician* 2009; 79:135-140.

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7. US Food and Drug Administration. Center for Drug Evaluation and Research. Desonate gel prescribing information. Available from: URL:https://www.accessdata.fda.gov/drugsatfda_docs/label/2014/021844s0081bl.pdf. Last accessed on 28 November, 2020.
8. US Food and Drug Administration. Center for Drug Evaluation and Research. FDA drug application 202145 by Glenmark generics. Available from: URL: https://www.accessdata.fda.gov/drugsatfda_docs/label/2013/202145Orig1s1bl.pdf. Last accessed on 28 November, 2020.
9. Fried Lander SF, Hebert AA, Allen DB. Safety of fluticasone propionate cream 0.05% for the treatment of severe and extensive atopic dermatitis in children as young as 3 months. *J Am Acad Dermatol* 2002; 46(3):387-393.
10. US Food and Drug Administration. Center for Drug Evaluation and Research. Soltamox prescribing information. Available from:https://www.accessdata.fda.gov/drugsatfda_docs/label/2002/19625s12s131bl.pdf. Last accessed on 2 December, 2020.
11. US Food and Drug Administration. Center for Drug Evaluation and Research. Mometasane furoate prescribing information. Available from: https://www.accessdata.fda.gov/drugsatfda_docs/label/2013/019543s0241bl.pdf. Last accessed on 2 December, 2020.
12. US Food and Drug Administration. Center for Drug Evaluation and Research. Available from:https://www.accessdata.fda.gov/drugsatfda_docs/anda/2001/75733_Clobetasol%20Propionate_Prnt1bl.pdf. Last accessed on 5 December, 2020.
13. Carlos G, Uribe P, Penas PF. Rational use of topical corticosteroids. *Aust Prescr* 2013; 36:158-161
14. Long CC, Finlay AY. The finger-tip unit: A new practical measure. *Clin Exp Dermatol* 1991; 16:444-447
15. Topical therapy and topical corticosteroids. In: Habif TP, editor. *Clinical Dermatology*. 5thedn. New Delhi: Mosby Elsevier Inc; 2010; pp75-90.
16. Nelson AA, Miller AD, Fleischer AB, Balkrishnan R, Feldman SR. How much of a topical agent should be prescribed for children of different sizes? *J Dermatolog Treat* 2006; 17(4): 224-228.
17. Maronn ML, Bree AF, Siegfried EC, Zvulunov A, Zinman OW, Amitai DB, et al. Principles of treatment in pediatric dermatology. In: Schachner LA, Hansen RC, editors. *Pediatric Dermatology*. 4thedn, Vol I. China: Mosby Elsevier; 2011; pp 146-148.
18. Saraswat A. Ethical Use of Topical Corticosteroids. In: Lahiri K. (eds) *A Treatise on Topical Corticosteroids in Dermatology*. Springer, Singapore.2018;73-79. https://doi.org/10.1007/978-981-10-4609-4_5. Last accessed on 5th December, 2020.
19. Devillers ACA, Oranje AP. Efficacy and safety of 'wetwrap' dressings as an intervention treatment in children with severe and/or refractory atopic dermatitis: a critical review of the literature. 2006; 154(4):579-585.
20. Mehta AB, Nadkarni NJ, Patil SP, Godse KV, Gautam M, Agarwal S. Topical corticosteroids in dermatology. *Indian J Dermatol Venereol Leprol* 2016; 82:371-378.
21. Jeziorkowska R, Jedrzejowska AS, Samochocki. Topical steroid therapy in atopic dermatitis in theory and practice. *Postepy Dermatol Alergol* 2015; 32(3):162-166.
22. Saeki H, Furue M, Furukawa F, Hide M, Ohtsuki M, Katayama I, et al. Guidelines for management of atopic dermatitis. *J Dermatol* 2009; 36:563-577.
23. Abraham A, Roga G. Topical steroids damage skin. *Indian J Dermatol* 2014; 59(5):456-459.
24. Saraswat A. Topical corticosteroids use in children: Adverse effects and how to minimise them. *Indian J Dermatol Venereol Leprol* 2010; 76:225-228.
25. Tiwari A, Goel M, Pal P, Gohiya P. Topical steroid induced iatrogenic cushing syndrome in the pediatric age group: Rare case report. *Indian J Endocr Metab* 2013;17: S257-S258.
26. Verma SB. Topical corticosteroids misuse in India is harmful and out of control. *BMJ* 2015;351:h6079 doi:10.1136/bmj.h6079.
27. Coondoo A, Sengupta S. Topical corticophobia among parents and caregivers of atopic children. *Indian J Pediatr Dermatol* 2016; 17:255-257.