

In The Name of God

The role of corticosteroids in skin disease

September 2020



TEHRAN UNIVERSITY
OF
MEDICAL SCIENCES

Janunide®
Desonide



Topical CorticoSteroids (TCS)

Does age and sex matter?

Dr. Mehran Heydari Seraj, MD



TEHRAN UNIVERSITY
OF
MEDICAL SCIENCES



Introduction

- Age, sex, underlying special physiological conditions like pregnancy, lactation, are important when prescribing TCS.
- TCS should be used with caution in children due to larger surface area to body weight ratio and poor skin barrier function and in elderly due to skin fragility.
- Female patients are more prone to steroid adverse effects due to their tendency to use TCS indiscriminately.
- Since there are no well-controlled studies of the teratogenic potential of most of the TCS in pregnancy, they are categorized as pregnancy category C and thus recommended to be used only if the potential benefit justifies the potential risk to the fetus.
- During lactation, they are to be used with caution.



TCS in Children



Overview

- Many physicians are concerned about systemic absorption and will not use any topical steroids stronger than 1% hydrocortisone on infants.
- The relative safety of moderately strong topical steroids and their relative freedom from serious systemic toxicity despite widespread use in the very young have been clearly demonstrated.
- Patients should be treated for a specific length of time with a medication of appropriate strength.
- Steroid creams should not be used continually for many weeks, and patients who do not respond in a predictable fashion should be reevaluated.
- Group I topical steroids should be avoided in prepubertal children. Use only group VI or VII steroids in the diaper area and for only 3 to 10 days.
- Monitor growth parameters in children prescribed chronic topical glucocorticoid therapy.



Table 1: Topical corticosteroids approved by food and drug administration in children

Topical corticosteroid	Age group
Clobetasol propionate 0.05% foam	Above 12 years
Fluocinonide 0.1% cream	Above 12 years
Fluocinolone acetonide 0.01% oil	Above 2 years
Mometasone 0.1% cream/ointment	Above 2 years
Fluticasone 0.05% cream/lotion	Above 1 year
Acclometasone 0.05% cream/ointment	Above 1 year
Prednicarbate 0.1% cream/ointment	Above 1 year
Desonide 0.05% foam/gel	Above 3 months
Hydrocortisone butyrate 0.1% cream	Above 3 months

APPENDIX I. GUIDELINES FOR THE PRACTICAL USE OF TCS

When to apply

Apply 1–2 applications per day as per the product information, to all the inflamed skin until eczema is cleared. There is no requirement for intervals without therapy.

How much to apply

There is no requirement to use sparingly. Please refer to the following table of application volume recommendation.

TABLE A1. FINGERTIP UNIT^{17,18}

Patient's age	Face and neck	Arm and hand	Leg and foot	Anterior chest and abdomen	Back and buttocks
3–12 months	1	1	1½	1	1½
1–3 years	1½	1½	2	2	3
3–6 years	1½	2	3	3	3½
6–10 years	2	2½	4½	3½	5
>10 years	2½	4	8	7	7



TCS in Children

- Diluting a strong steroid with moisturizer does not reduce its clinical effect. Potency reduction is achieved by using a less potent steroid molecule.
- Most topical steroids can be applied once daily, preferably in the evening or at night.
- When TCS used for eczema in children are stopped on resolution of the dermatosis, irreversible skin thinning does not occur.
- TCS do not induce striae when used to treat atopic eczema in children, unless used inappropriately, or in overdose and only then at certain sites (i.e., axilla and groin).
- Physiological HPA suppression can occur with very widespread and prolonged, or occlusive use of potent/superpotent TCS. This recovers quickly.
- There is no evidence that applying TCS on excoriated or infected eczema is deleterious.



TCS in Children

- TCS should be the first-line treatment for atopic eczema, regardless of whether the skin is excoriated or infected.
- Reduced bone mineral density is very unlikely to occur in children with eczema treated with TCS.
- Prolonged use of potent TCS in the periorbital area has rarely been associated with cataract and glaucoma.
- TCS use away from the eyes has not been shown to cause ocular sequelae.
- Transient hypertrichosis has been seen in discoid eczema and prurigo nodularis treated with potent TCS.
- TCS do cause short-term vasoconstriction, which can be mistaken as hypopigmentation.
- Routine use of TCS in children with eczema should not cause telangiectasia.



TCS in Elderly Patients



Effects of TCS on the skin of elderly patients

- Skin is dry and steroids are poorly absorbed.
- Aged, atrophied skin is susceptible to steroid-induced skin atrophy, peliosis, and steroid skin injury, changes that are difficult to resolve once they occur.
- Senile dermatoses follow a chronic course, are intractable, and require prolonged topical application of steroids, which then can lead to adverse reactions to the drug.
- Steroids of an appropriate potency should be chosen according to the lesion and should be applied for as short a period as possible.
- The skin of the face is thin, particularly in the perioral and periocular areas, as is skin in the genitocrural and perianal regions, and axilla. Since these areas are susceptible to steroid-induced atrophy, due caution is necessary in selecting the potency of steroid to be applied.





TCS During Pregnancy

Safety of Topical Corticosteroids in Pregnancy

Ching-Chi Chi, MD, MMS, DPhil, FAAD; Shu-Hui Wang, MD, MS; Gudula Kirtschig, MD, PhD

- No causal associations of maternal use of topical corticosteroids of any potencies with birth defects, preterm delivery, fetal death, and low Apgar score.
- On the other hand, low birth weight was associated with maternal use of potent or very potent topical corticosteroids, especially when the administered dosage during pregnancy is large.
- Mild or moderately potent topical corticosteroids are preferred for use in pregnancy.



Topical corticosteroid use during pregnancy

Fatoumah Alabdulrazzaq MD Gideon Koren MD FRCPC FACMT

VOL 58: JUNE • JUIN 2012 | *Canadian Family Physician • Le Médecin de famille canadien*

- The risk of adverse events is increased, theoretically, with use on high-absorption areas like the eyelids, genitals, and flexures.
- Currently, there are no data to determine the fetal safety of the newer potent lipophilic topical corticosteroids (eg, mometasone, fluticasone, and methylprednisolone) and whether they are associated with less risk of fetal growth restriction.
- Overall topical corticosteroids appear to be safe during pregnancy.
- High-potency topical corticosteroids should be avoided if possible and when they must be used they should be used only for the shortest period possible.



THANK YOU FOR YOUR ATTENTION



W W W . A R G A N O . I R



TEHRAN UNIVERSITY
OF
MEDICAL SCIENCES

