WHAT’S TOPICAL IN TOPICALS

TOPICAL CORTICOSTEROIDS: WHAT, WHEN, WHERE, HOW MUCH AND FOR HOW LONG

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REFERENCES TO OFF-LABEL USAGE(S) OF PHARMACEUTICALS OR INSTRUMENTS

• Nothing to disclose

DISCLOSURE OF RELEVANT FINANCIAL RELATIONSHIP(S) WITH INELIGIBLE COMPANIES

• Nothing to disclose

All relevant financial relationships have been mitigated.
TOPICAL STEROIDS

HOW TO CHOOSE

• How do I decide which topical steroid potency to use?
• What vehicles are suitable for different clinical situations?
• What quantity should be prescribed?
TOP SECRET INFORMATION
AIM

• To provide a practical guide to the use of topical corticosteroids and other topical immunosuppressive medications
  • Cases we have shared with you
  • Situations I commonly get questions about
LEARNING OBJECTIVES

• To remember names of 3 corticosteroid creams you can use in your practice:
  • Low potency
    • Hydrocortisone
  • Mid potency
    • Triamcinolone
  • High potency
    • Clobetasol/fluocinonide
• To know when to use other topical immunosuppressive medications
  • Tacrolimus
  • Pimecrolimus
• To know what vehicles are suitable for different clinical situations
• To know how much to prescribe
A SUMMARY OF DERMATOLOGY

IF IT’S WET, DRY IT
IF IT’S DRY, WET IT
FURTHERMORE

IF THEY’RE OFF STEROIDS PUT THEM ON THEM
IF THEY’RE ON STEROIDS TAKE THEM OFF THE
EFFECT OF CORTISONE AND PITUITARY ADRENOCORTICOTROPIC HORMONE (ACTH) ON RHEUMATIC DISEASES

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In our first series of cases of rheumatoid arthritis, in all of which the disease was severe, the antirheumatic effect was very marked (almost complete relief) in 12 (57 per cent) of the 21 cases in which cortisone was given, marked (75 to 90 per cent relief) in 8 (38 per cent) and moderate in 1 (5 per cent). The antirheumatic effect was very marked in 4 (67 per cent) of 6 cases in which pituitary adrenocorticotropic hormone was given and marked in the remaining 2 (33 per cent).

GENERAL PLAN OF DOSAGE

Cortisone.—Cortisone was given as a crystalline suspension injected intramuscularly. The initial dose
CHEMICAL STRUCTURE OF CORTISOL
SYSTEMIC CORTICOSTEROIDS

• Miraculous for inflammatory dermatoses
  • OK for short-term

• So why not use them all the time?

• Side-effects
  • Associated with prolonged or repeated use of systemic corticosteroids

• What’s more sustainable?
CLINICAL PEARL

• Don’t use continuous or repeated (oral or injected) corticosteroids eg, prednisone as a long-term treatment for dermatitis

• High doses are often needed

• Serious short- and long-term adverse effects in both children and adults
TOPICAL CORTICOSTEROIDS
HISTORY

- First used shortly after discovery of corticosteroids at Mayo Clinic
  - Nobel prize 1950
- Mainstay of treatment for all inflammatory skin disease since then
  - Dermatitis
- Anti-inflammatory drugs
- Classified according to vasoconstrictor ability
<table>
<thead>
<tr>
<th>Brand Name</th>
<th>Generic Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class 1 – Super potent</strong></td>
<td></td>
</tr>
<tr>
<td>Clobex® lotion/spray/shampoo</td>
<td>0.05% clobetasol propionate</td>
</tr>
<tr>
<td>Olux® E foam</td>
<td>0.05% clobetasol propionate</td>
</tr>
<tr>
<td>Temovate E® emollient/cream/ointment/Gel/Scalp</td>
<td>0.5% clobetasol propionate</td>
</tr>
<tr>
<td>Ultravate® cream</td>
<td>0.05% halobetasol propionate</td>
</tr>
<tr>
<td>Vanos® cream</td>
<td>0.1% fluocinolone</td>
</tr>
<tr>
<td><strong>Class 2 – Potent</strong></td>
<td></td>
</tr>
<tr>
<td>ApexiCon® cream</td>
<td>0.05% diflorsone diacetate</td>
</tr>
<tr>
<td>Elocon® ointment</td>
<td>0.1% mometasone furoate</td>
</tr>
<tr>
<td>Halog® ointment</td>
<td>0.1% halcinonide</td>
</tr>
<tr>
<td>Topicort® cream/ointment</td>
<td>0.25% desoximetasone</td>
</tr>
<tr>
<td><strong>Class 3 – Upper mid strength</strong></td>
<td></td>
</tr>
<tr>
<td>Lidex-E® cream</td>
<td>0.05% fluocinolone</td>
</tr>
<tr>
<td>Topicort® LP cream</td>
<td>0.05% desoximetasone</td>
</tr>
<tr>
<td><strong>Class 4 – Mid Strength</strong></td>
<td></td>
</tr>
<tr>
<td>Cloderm® cream</td>
<td>0.1% clocortolone pivalate</td>
</tr>
<tr>
<td>Elocon® cream</td>
<td>0.1% mometasone furoate</td>
</tr>
<tr>
<td>Aristocort® A cream, Kenalog® ointment</td>
<td>0.1% triamcinolone acetonide</td>
</tr>
<tr>
<td>Luxiq® foam</td>
<td>0.12% betamethasone valerate</td>
</tr>
<tr>
<td>Synalar® ointment</td>
<td>0.25% fluocinolone acetonide</td>
</tr>
<tr>
<td><strong>Class 5 – Lower Mid Strength</strong></td>
<td></td>
</tr>
<tr>
<td>Cutivate® lotion</td>
<td>0.05% fluticasone propionate</td>
</tr>
<tr>
<td>Dermatop® cream</td>
<td>0.1% prednicarbate</td>
</tr>
<tr>
<td>Pandel® cream</td>
<td>0.1% hydrocortisone probutate</td>
</tr>
<tr>
<td>Synalar® cream</td>
<td>0.025% fluocinolone acetonide</td>
</tr>
<tr>
<td><strong>Class 6 – Mild</strong></td>
<td></td>
</tr>
<tr>
<td>Aclovate® cream/ointment</td>
<td>0.05% alclometasone dipropionate</td>
</tr>
<tr>
<td>Verdeso™ foam</td>
<td>0.05% desonide</td>
</tr>
<tr>
<td>Desonate Gel™</td>
<td>0.05% desonide</td>
</tr>
<tr>
<td>Derma-Smoothe/FS® scalp oil</td>
<td>0.01% fluocinolone acetonide</td>
</tr>
<tr>
<td>Synalar® topical solution</td>
<td>0.01% fluocinolone acetonie</td>
</tr>
<tr>
<td><strong>Class 7 – Least Potent</strong></td>
<td></td>
</tr>
<tr>
<td>Nutracort® lotion, Synacort® cream and generic prescription strength creams, lotions &amp; ointments</td>
<td>2%/2.5% hydrocortisone</td>
</tr>
<tr>
<td>Cortaid® cream/spray/ointment and many other over-the-counter products</td>
<td>0.5-1% hydrocortisone</td>
</tr>
</tbody>
</table>
WHICH ONE SHOULD I USE?
PICK 1 FROM EACH GROUP
OUR WORKHORSE DRUGS ARE

Low potency
• Hydrocortisone 1% – available over the counter

Mid potency
• Triamcinolone 0.1%

High potency
• Clobetasol 0.05%
• Fluocinonide 0.05%
• Betamethasone 0.1%
IN KIDS
PICK 1 FROM EACH GROUP OUR WORKHORSE DRUGS ARE

Low potency

• Hydrocortisone 1% – available over the counter

Mid potency

• Triamcinolone 0.1%
LOW POTENCY
HYDROCORTISONE 1%

• Face
  • Including eyelids

• Body folds/intertriginous areas
  • Axillae
  • Groin
  • Perianal area
MID POTENCY
TRIAMCINOLONE 0.1%

• Everywhere else

• ‘Neck down except body folds’

• Can be used indefinitely
HIGH POTENCY
CLOBETASOL/FLUOCINONIDE/BETAMETHASONE

• Areas of ‘thick skin’
  • Scalp dermatoses
  • Hand dermatoses

• ‘Thick’ inflammatory dermatoses
  • Psoriasis
  • Prurigo nodularis

• ‘Severe’ inflammatory dermatoses
  • Poison ivy dermatitis

• Places that might surprise you
  • Mucosal membranes
    • Oral – aphthous ulcers, ulcerated oral lichen planus
    • Vulval – lichen sclerosus (et atrophicus)
POSSIBLE ADVERSE EFFECTS – LOCAL
MOSTLY SEEN WITH HIGH POTENCY

• Atrophy
• Telangiectasias
• Skin bruising
• Fragility
• Ecchymoses
• Allergic contact dermatitis
WHAT VEHICLE?

- Ointments
- Creams
- Lotions
- Solutions
- Gels
- Foams
- Sprays
WHAT VEHICLE?
RULE OF THUMB

All can be used on skin in addition:

• *Ointments- anywhere
• *Creams- anywhere
• Lotions- anywhere
• Solutions- scalp
• Foams- scalp
• Sprays- scalp
• Gels- mucous membranes especially mouth
VEHICLE

- Affects potency
  - Ointment > cream > lotion
- Ointments
  - More soothing
HOW MUCH TO APPLY?

One fingertip unit will cover 1 hand = approx 0.5g

Implication:
• Total body involvement?
• You need 38 g for each application!
IN PRACTICE
WHEN PRESCRIBING: GIVE ENOUGH!!

• Make sure to give your patient enough topical corticosteroid
  • Limited skin involved? Give 60-80g
  • Lots of patches? Give 120-240 g
  • Full body? Give 484 g (1 lb)
HOW OFTEN APPLIED
1-2 TIMES DAILY
HOW LONG SHOULD TOPICAL STEROIDS BE USED?

• Until dermatosis is under control

• Not indefinitely!
CALCINEURIN INHIBITORS

• Calcineurin inhibitors
  • Topical tacrolimus 0.1% or 0.03% ointment applied BID
  • Topical pimecrolimus cream 1% applied BID
• Potency: Equivalent to Low to mid potency corticosteroids
OFF-LABEL USE: CALCINEURIN INHIBITORS

• Use instead of topical corticosteroids
  • Other forms of dermatitis
• Especially face, intertriginous areas
  • Other inflammatory disorders of skin
• Lichen planus, lichen sclerosus et atrophicus
• About equivalent to low to mid-potency topical corticosteroids
CALCINEURIN INHIBITORS

BLACK BOX WARNING

• In view of case reports with systemic (oral/iv) tacrolimus, theoretical risk of lymphoma with topical forms

• FDA recommendations:
  • Avoid use
    • For sustained treatment
    • As first-line agents
    • In children <2 years old
PICK 1 FROM EACH GROUP
OUR WORKHORSE DRUGS ARE

Low potency
• Hydrocortisone 1% – available over the counter

Mid potency
• Triamcinolone 0.1%

High potency
• Clobetasol 0.05%
• Fluocinonide 0.05%
WHAT VEHICLE?

• Ointments
• Creams
• Lotions
• Solutions
• Gels
• Foams
• Sprays
IN PRACTICE WHEN PRESCRIBING

- Make sure to give your patient enough topical corticosteroid
  - Limited skin involved? Give 60 g
  - Lots of patches? Give 120-240 g
  - Full body? Give 484 g (1 lb)
HIT THIS ONE OUT OF THE PARK
WHICH STEROID WILL YOU USE?

Which steroid?
Which vehicle?
How much?
Which steroid?
Which vehicle?
How much?
Which steroid?
Which vehicle?
How much?
Which steroid?
Which vehicle?
How much?
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How much?
Which steroid?
Which vehicle?
How much?
Which steroid?
Which vehicle?
How much?
Special ingredient?
Which steroid?
Which vehicle?
How much?
Special ingredient?
Which steroid?
Which vehicle?
How much?
Special ingredient?
Which steroid?
Which vehicle?
How much?
Special ingredient?
Which steroid?
Which vehicle?
How much?
Can the effect of corticosteroids be augmented and give this patient relief?
YES!
AS INPATIENT OR OUTPATIENT

Wet dressings

PJ/s/
Longjohns
WET DRESSINGS IN CONJUNCTION WITH TOPICAL STEROIDS WORK!
HOW DO WE DO WET DRESSINGS?

• Simply put:
  • Wear wet PJ’s /longjohns or
  • Wear dry PJ;s/longjohns and get them wet
  • Keep warm
OVERALL MESSAGE
THANK GOODNESS FOR TOPICAL CORTICOSTEROIDS!
NOW THAT HAVE TOLD YOU ALL OUR DERMATOLOGY SECRETS......

But what should you do if the topical steroids don’t work!

That, my dear, must be kept a secret – and now AU REVOIR
QUESTIONS & DISCUSSION
THANK YOU FOR JOINING US IN THIS COURSE

Rochester, Minnesota  Phoenix, Arizona  Jacksonville, Florida