# Management of eczema in infants and children

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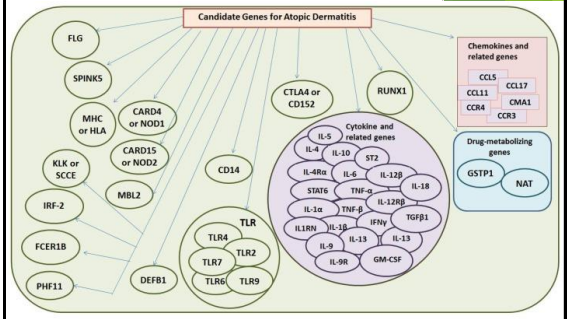
## Atopic dermatitis 'definition'

- "Atopic derm… lasting (chronic)… flare period… bside"
  - Mayo…
- "Atopic dermati… inflammatory dermat… n of flare-ups"
  - Foundation f…
- "Atopic d… inflammato…
  - AAAAI

## Eczema

- Primarily best considered to be a reaction pattern in skin
- Tendency for sensitive/allergic skin is chronic
  - Degree of 'atopy'
- Many different triggers
  - Most eczema presentations are multifactorial
- Aim of those presenting with eczema is to have no eczema most days
  - Should not be a chronic condition



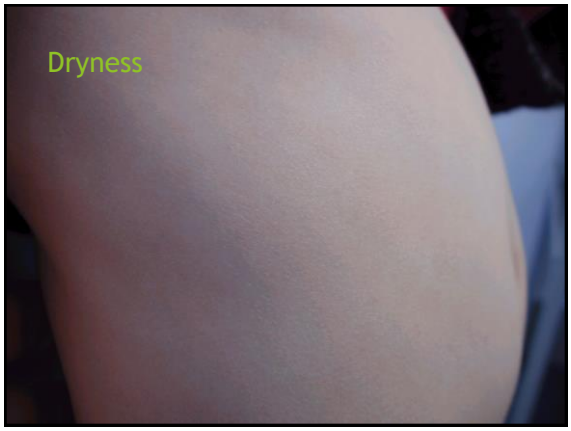

## Eczema- take home message

- Help individuals identify and manage their triggers
- Settle any eczema with anti-inflammatory/immune modulating medicines

## Eczema: Common triggers

- Dryness
- Heat
- Irritation
- Infection
- Allergy
- Intolerance
- (Other) Immune stimulus
- Venous insufficiency

## Dryness



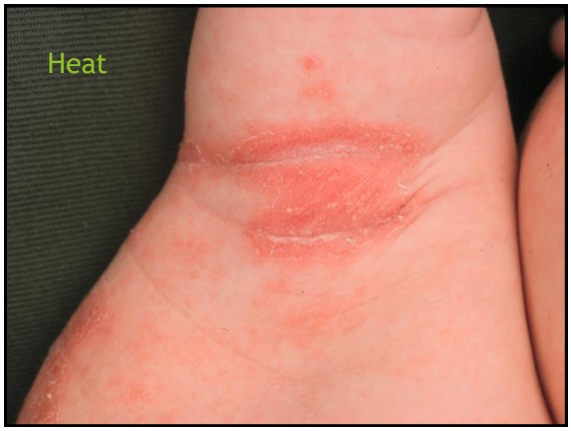
## When to emphasize dryness

- Skin feels dry
- Worse in winter
- Better in tropics
- Exposed areas, hands and lower legs involved

## Which moisturizer?

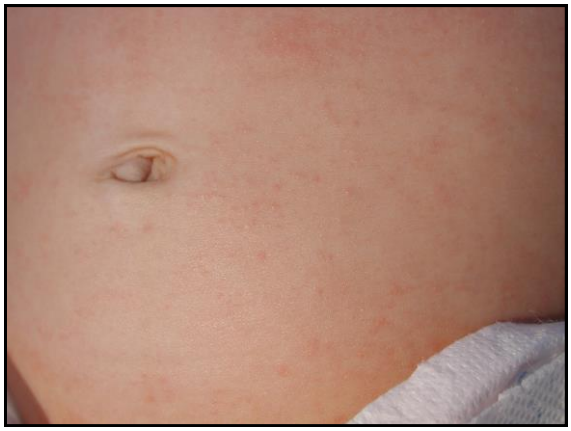
- Should only be required twice per day
- Too thin
  - Does not moisturize effectively
- Too thick
  - Contributes to overheating, blocked pores, sticks to clothes
- The best moisturizer is guided by personal preference
- Role is not to clear eczema but to keep skin moisturized

## Heat

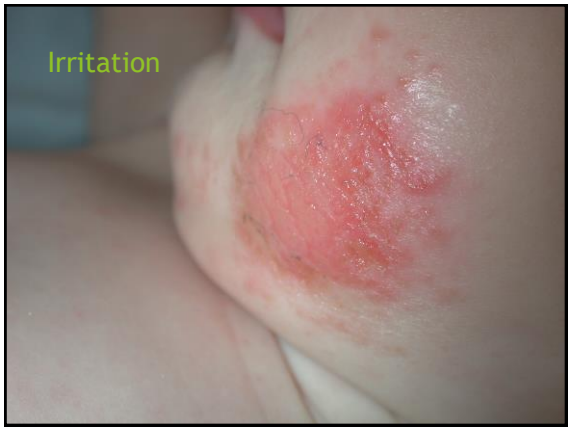


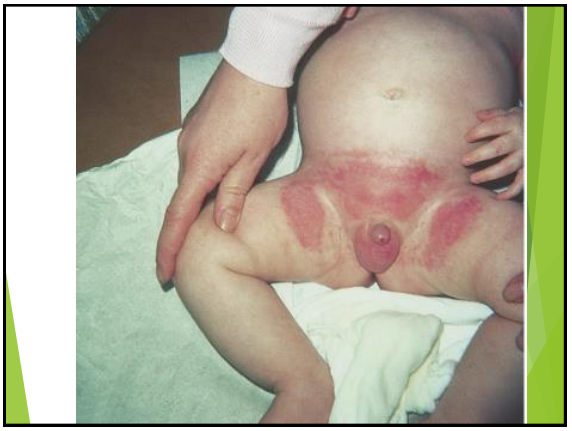
## When to emphasize heat

- Hot areas/flexures affected
- Babies, particularly in winter
- Multiple red dots



## Irritation

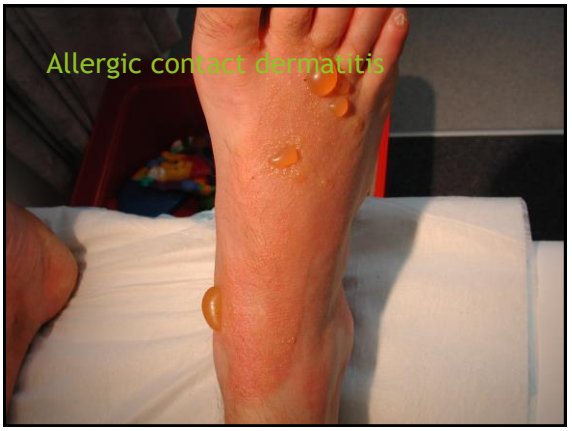




## When to emphasize irritancy

- Localised areas of eczema
- High irritant zones
  - Face
  - Hands
  - Nappy area
  - Neck
  - Cubital and popliteal fossae

## Allergic contact dermatitis



## Environmental allergens

## When to emphasize environmental allergens

- HDM, grass pollens, animal dander
- Age > 2
- Flares with known exposures
- Distribution:
  - Eyelids, forehead
  - Neck
  - Elbows and knees

## Environmental allergens testing

- SPT or RAST
- HDM, grass pollens, animal dander
- Check total IgE as well
  - N<200
  - If <500, may be a factor but unlikely major factor
  - Can be >1000s

## Food allergy

## When to emphasize food allergy

- Less than 1 yo
- Widespread eczema
- Very unsettled
- Associated GIT upset or FTT
- Any reactions to foods

## Food allergy

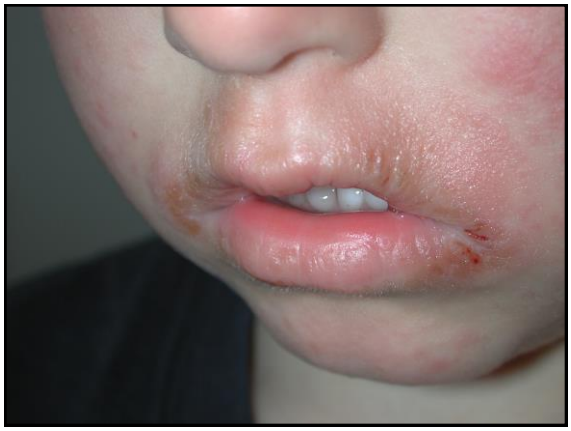
- Can be urticarial but can be direct eczema flare
- Should not be a problem with foods tolerated multiple times without flare
- Can be:
  1. Formula
  2. Via breast milk (eggs, nuts, dairy)

## Food allergy- investigation

- Skin prick testing
- RAST testing
  - Funding limited to 4
  - Dairy, soy, egg, nut mix
  - Test total IgE as well
    - Negative indicates unlikely to have type 1 allergy
    - Strong positive will have non-specific binding and false positives

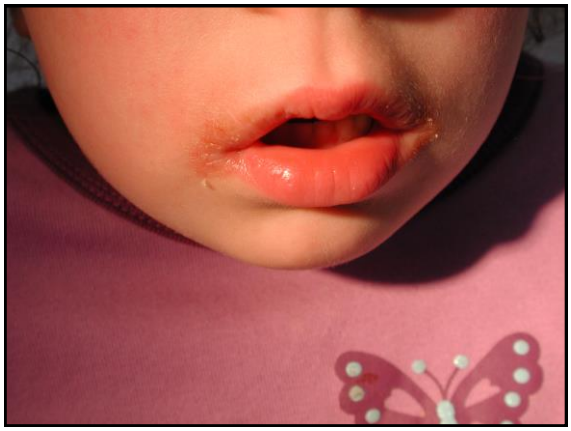
## Food intolerance

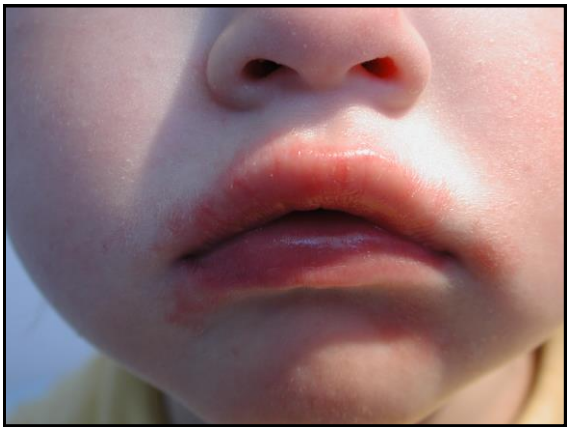
- Reaction to food through non-allergic means
- Perioral eczema
- 18/12 to 5yo
- Mechanism is unclear

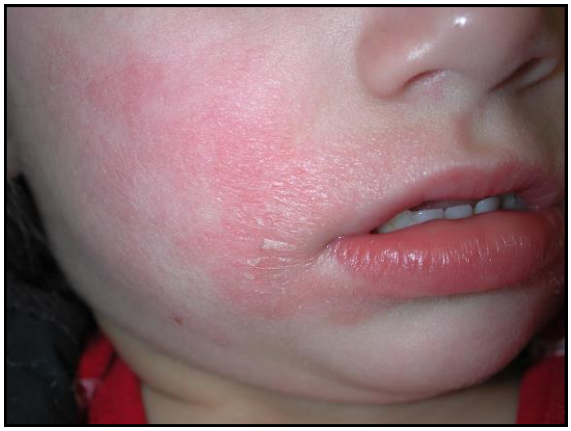


## ‘Acidic foods’

- Foods high in salicylates and amines
  - Vasoreactive substances
- Tomatoes, strawberries, citrus fruits, watermelon, soya sauce, acidic preservatives
- Specific foods for certain individuals
- Trial and error

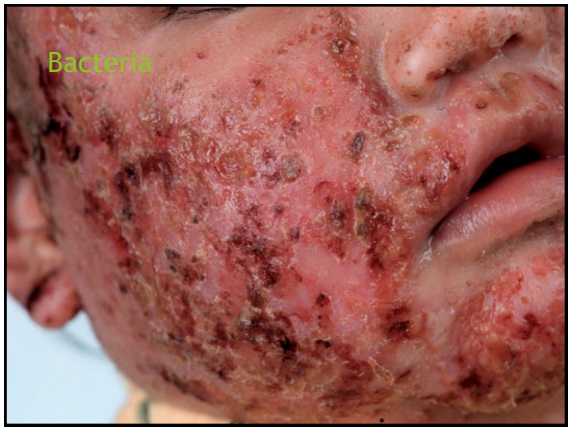


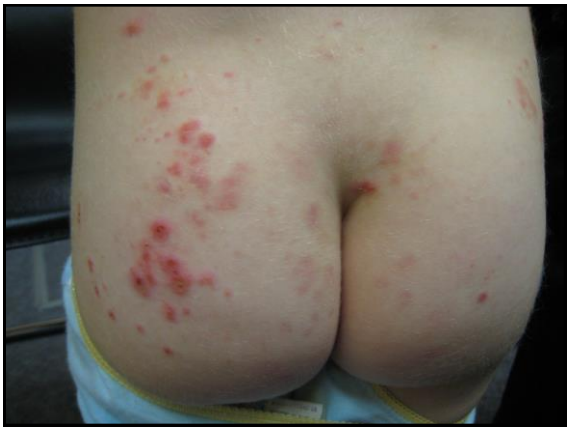


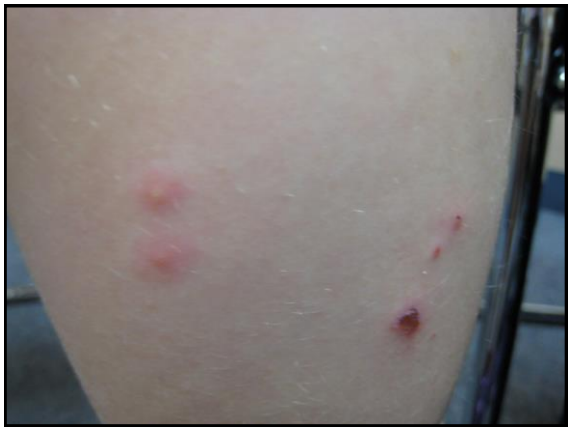


## INFECTION

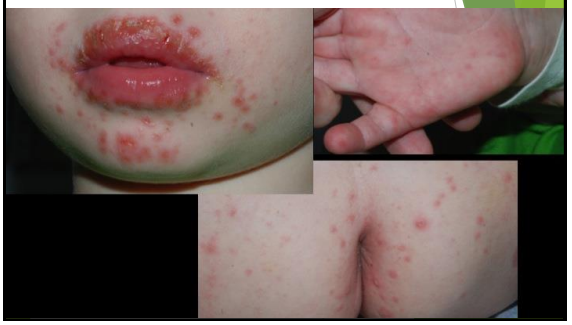
- Weeping or crusted eczema
- Multiple excoriations
- ?role in ‘typical’ eczema via superantigens
- Specific infections:
  - eczema herpeticum
  - seborrhoeic dermatitis
  - molluscum contagiosum
  - Coxsackie A6



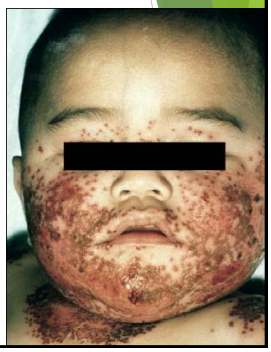





## HFMD



## Eczema herpeticum

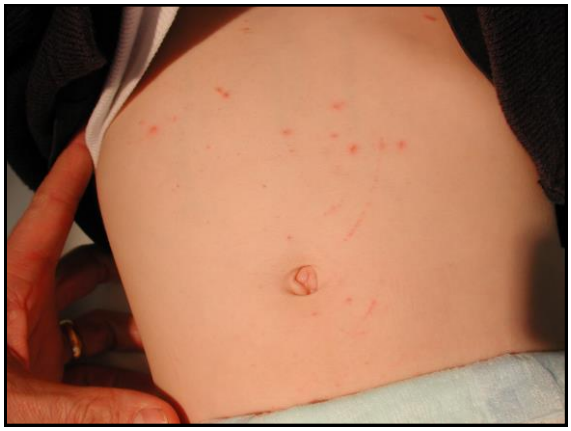


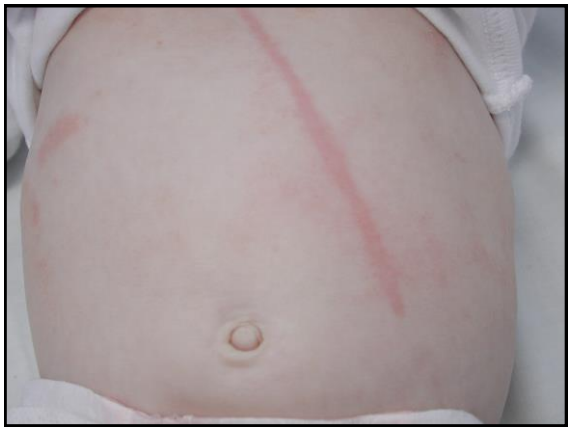
## Which patients benefit from antibacterial therapy?

- Repeated clinical secondary infection
- Repeated improvement with antibiotics
- Options
  - Bleach baths
    - Royal Children's Hospital has handout
  - Bactrim prophylaxis

## Dermographism

- Itchy child when minimal eczema but multiple excoriations
- Scratching 'fits'
- Most are viral induced and acute but some allergy driven



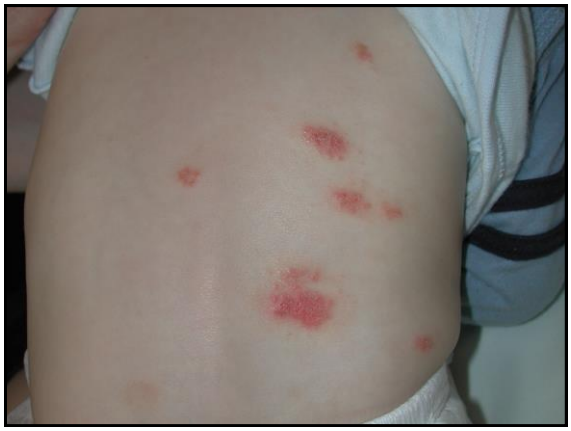


## Antihistamines

- Cochrane review
  - "not effective in atopic dermatitis"
- Are useful in some with symptomatic dermographism

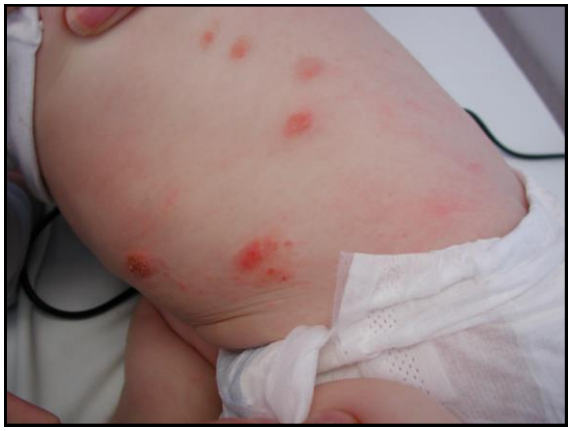
## Discoid (Nummular) eczema

- Unknown aetiology
- Seems to start with eczema at one site for any reason
  - Patients not necessarily very atopic
- Skin breaks out in 'sympathy' patches
- Predominantly a vicious cycle
- Skin can be weepy if intense



## Discoid eczema

- Aim is to break vicious cycle
- Aggressive topical steroids
  - If infected, add oral antibiotics
- Wet dressings
- Sunlight/UVB very useful
- Lower threshold for systemic immunosuppression if very difficult



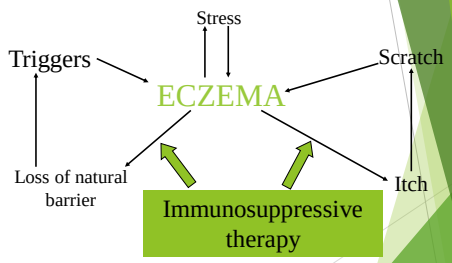
## Aim of eczema management

1. Identify and address the various triggers
2. Settle the eczema with immunomodulatory therapies

Art of managing eczema is to know when to emphasize certain triggers for individual children

## Topical corticosteroids

## Rationale of immunomodulatory therapies




## Rationale of immunomodulatory therapies

1. Must stop scratching
2. Must restore barrier
3. Must allow sleep
4. Must have a level of control to allow for critical assessment of triggers

## Topical corticosteroids

- Aim is to be in the situation where none are required
- Unless used liberally and persistently, will not achieve this aim
- Potential for side effects is massively overestimated:

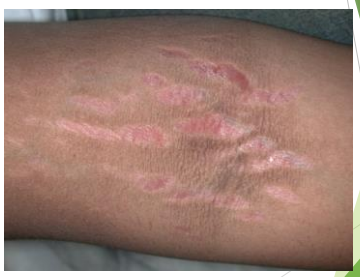
## 1. Atrophy

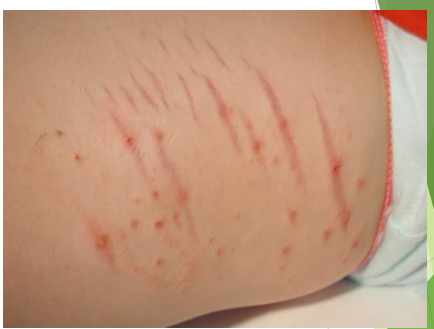
- The most quoted side effect concern.
- 'skin thinning' usually misrepresentation of active eczema
- irreversible skin thinning does not occur

## 2. Striae

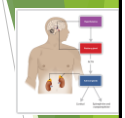
- TCS can contribute to striae with prolonged use in prone sites at prone ages
- TCS do not produce striae in children using standard topical corticosteroid treatment for eczema

## Striae





## 3. HPA Axis Suppression



- Would be requiring copious amounts of potent TCS for a prolonged period of time
- Practically not an issue
  - One tube of methylprednisolone/mometosone/Diprosone per week in 6 month old baby would not be of concern

## 4. Infected or Excoriated Skin

- TCS should be the first line treatment for excoriated or infected eczematous skin
- No evidence that TCS on excoriated or infected eczema is deleterious

## 5. Allergic Contact Dermatitis

- Allergy to TCS is extremely rare in children with eczema

## 6. Osteopenia/ Osteoporosis

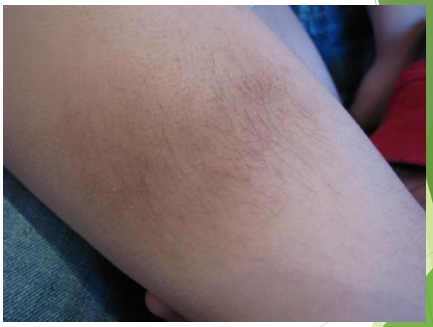
- Reduced bone mineral density would require prolonged copious amounts of potent TCS
- In Australia have not seen any children with atopic eczema using only TCS who developed osteopenia or osteoporosis

## 7. Ocular Effects

- Summary of eyelid use
  - Comfortable with Hydrocortisone use long term
  - More potent topical steroids can be used for short bursts, 5-7 days
  - More conservative with those with already known ocular disease

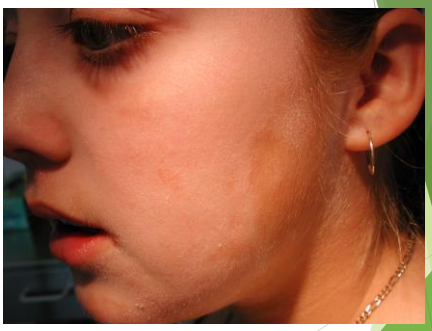
## 8. Hypertrichosis

- Transient hypertrichosis
  - discoid eczema
  - prurigo nodularis
- TCS do not cause permanent hypertrichosis
- The temporary hypertrichosis is probably caused by the disease



## 9. Hypopigmentation

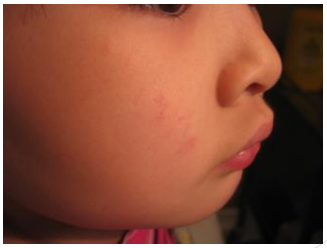
- TCS short-term vasoconstriction
- Inevitably secondary to the eczema (pityriasis alba)



## 10. Purpura & Telangiectasia

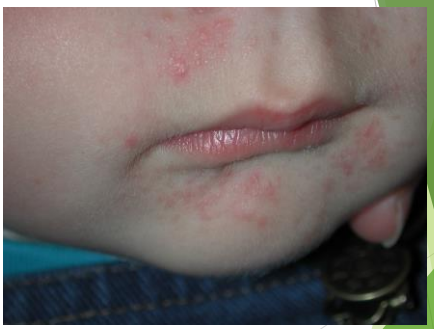
- Purpura does not occur in children with eczema using TCS
- Routine use of TCS in children with eczema should not cause telangiectasia

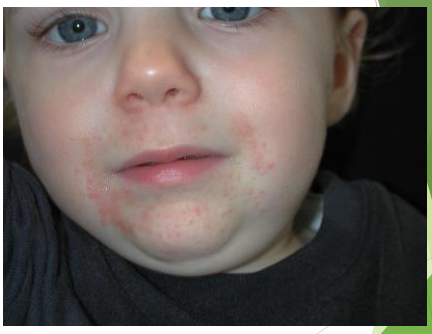
## Facial telangiectasia



## 11. Periorificial Dermatitis / Rosacea

- TCS may aggravate a tendency for perioral dermatitis/rosacea in predisposed individuals
- Prescribers should be aware of this complication





## 13. Tachyphylaxis

- No evidence to support that tachyphylaxis occurs in children with eczema treated with TCS

## Topical steroids

- Very few clinical settings when ought to be concerned of any overuse side effects
- More will end up being less
- Prescribe authority quantities
- Do not write “sparingly”.

## When to progress to systemic immunosuppression

- When impact of eczema on quality of life is significant
  - Sleep deprivation
  - Itch
  - School absenteeism
  - Parent-child relationship
  - Cosmetic/psychosocial impact
- Admit that either unable to avoid triggers and/or cannot identify

## Systemic immunosuppressive therapy

- Ultaviolet light
  - Natural sunlight
  - UVB
- Prednisolone
- Cyclosporin
- Azathioprine
- Mycophenylate
- Others

## Eczema

- Always be looking for triggers
  - Tailor to the individual
- Important not to let it remain severe or chronic
  - Be liberated with use of topical corticosteroids
  - Be aware of systemic agents


Thankyou!