

Subject :- Dermatology

Topic :- Zinc Deficiency

→ level? normal: 80-120 µg/dl
→ nuts (walnuts, almonds)

Aetiology -

Zn def. occurs in -

• Acrodermatitis enteropathica :-

AR trait, dlt def. zinc transporter protein. → gene? zinc binding protein

• Other causes :- Dietary def

(diet high in fibre, vegans diets, parenteral hyperalimentation)

malabsorption & HIV infection

Clinical features :-

* Seen in infants being weaned off mother's milk and is characterised by :-

1) Dermatitis - erosive dermatitis, scaly plaques in the periorificial region (around mouth, nose, anus and genitals), acral areas and pressure points (occiput, malleoli and buttocks).

2) Pustular & hemorrhagic paronychia.

3) Alopecia - non-scarring of the scalp

4) Systemic - apathetic look & weight loss.

Growth retardation & diarrhea.

Re: Zinc supplements
(30-50 mg of elemental Zn
given as 220 mg of Zn
sulphate) $\Rightarrow$ give according to
weight

HP: Skin biopsy typically shows:-

- pallor of upper epidermis
- epidermal necrosis
- spongiosis
- parakeratosis
- dyskeratotic keratinocytes
- reduced granular layer

1-3 mg/kg
daily
for 8-
12
weeks

DP:- Atopic dermatitis
Seborrheic dermatitis
Psoriasis

Cutaneous manifestations of
Vitamin - A (20-60 μ g/dL) - ~~20~~

Essential for: normal epithelial
differentiation, keratinization,
immune function & vision.

Pathogenesis:- Vit. A def. results
in $\rightarrow$ impaired diff. of epithelial
cells.

$\uparrow$ Keratin production (hyperkeratosis)

Atrophy of sebaceous and sweat
glands.

Dryness of skin

Impaired immunity & wound
healing.

1) Xerosis (Dry skin)

Rough, coarse texture

Fine scaling

Loss of normal skin sheen.

to ↑ skin fragility

500g/kg protein.

↑ Sides :: Ext. surface of limbs
↓ Trunk

2) Follicular hyperkeratosis (Phrynoderma)

Excessive keratin accumulates around hair follicles, producing rough follicular papules.

CF:-

→ numerous small, firm, hyperkeratotic papules.

→ skin feels like a 'nutmeg grater' or 'lead skin'.

→ papules are skin colored, brown or pigmented.

→ central keratin plug often present.

Distribution :: Ext. aspect of arms

(in) Thighs, buttocks, shoulders, forearms, legs.

3.) Generalized hyperkeratosis.

Persistent dy. causes :-

thickened skin

↑ scaling

rough texture
hyperpigmented keratotic plaques

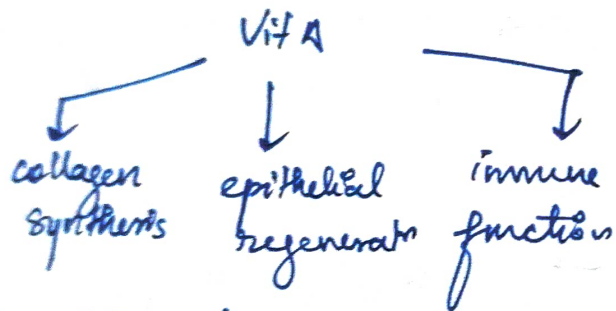
4.) Ichthyosis - like skin changes:

Fish scale appearance
polygonal scales
dry thick skin
↓ skin elasticity

5.) Pigmentary changes:

hyperpigmentation
uneven pigmentation
dull appearance of skin

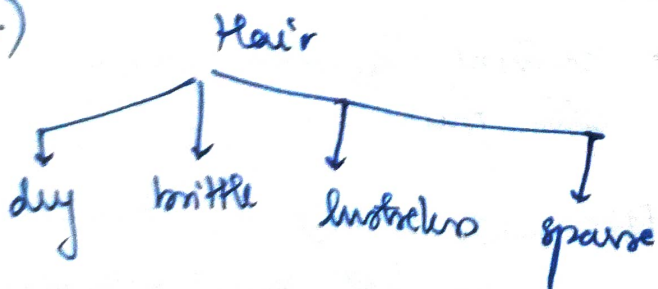
6.) Poor wound healing



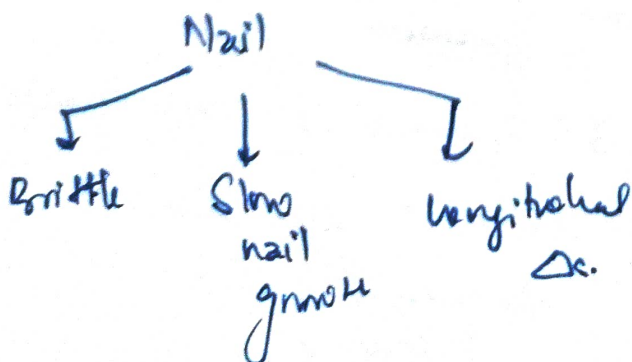
7.) 2° skin changes:-

Recurrent bacterial inf.
Impetigo
Folliculitis

8.)



9.)



R:- Vit A supplementation

1-3 million IU/day. for 3 days
then check levels.

Stages:- of nutritional disorder

- 1) ↓ intake
- 2) ↓ blood levels, no clinical manifestation
- 3) Clinical manifestation

Vitamin A Requirement:-

< 4 : 1000 IU/dl

> 4 : 5000 IU/dl

Q Zn def. is associated

○ Hep C virus.

↓
Necrotic acral erythema (NAE)