Normal Skin

The integument is the largest organ of the body. Its structure reflects its many functions.

Protective: epidermis / dermis = layers of epithelium and fat to act as buffers to pressure and assault; melanocytes protect from UV light.

Adaptive: The normal skin structure reflects its many functions.

Protective: accomodated by the skin's elasticity and flexibility. Thickness of layers will change with changing functions. Tight body cells and keratin, an oily waterproof substance.

Antibiotic / Antiseptic / Antitoxin: dermis - kills invading organisms; layers of oil from sebaceous glands; anti-typic properties; daily shedding of the stratum corneum sloughs off bacteria and toxic substances.

Sensitive: several specialized endings in the skin feedback specific information.

Thermoregulatory: the dermo-epidermal junction is highly vascular - capillary beds open and close to regulate temperature; sweat glands secrete water to cool the surface through evaporation.

Waste Management / Absorption: urea and other waste products excreted through the skin; nanoparticles can directly infiltrate through the skin's thin cellular tissue junctions.

Supportive: epidermis, structurally supports the hair, nails, glands, dermis, supplies immunological and neurovascular support to these structures.

Grip Enhancement / Identification: structural ridges of the epidermis prevent friction and provide a unique way of identifying people - finger prints.

Pyogenic Bacterial Infections of the Skin

Aetiology: Streptococcus pyogenes (group A haemolytic Streptococcus) 2/3, Staphylococcus aureus 1/3 + others. Me: cultures from the edge of the lesion or blood cultures are essential before starting ABs or other treatment but not necessary to wait for the result as in most cases the cultures are negative.

Incidence: any age, any state of health with or without precipitating factors for example skin injury or penetration.

Contributing factors: DM, poor compromised BP, immunosuppression, or topical antiseptics applied on superficial lesions.

Signs & Symptoms: Acute inflammation (i.e. Hot, red, pain, swollen & useless) may also be itchy.± also ± bullae, ± lymphangitis, ± septicaemia, ± ucers, ± vesciculation and may deteriorate unless treated.

Treatment: Penicillins (Check for allergies) or Erythromycin - topical for surface lesions - oral for mild cases - IV for serious cases ± hospital admission if necessary.

Results: resolution ± scar formation - amputation death in severe misdiagnosed cases. If in doubt give ABs even if there is another skin disease present, as it may co-exist with these infections.

Pyogenic Bacterial Infections of the skin

Cellulitis: Infections in the full thickness or lower half of the dermis - (Walt's cellulitis - erythroaemac cellullitis - no organisms). Neutrophils predominatant.

Erysipelas: Infections in the upper half of the dermis with superficial lymphatic involvement.

Folliculitis: Infections in and around the hair follicle - pilosebaceous unit: CARBUNCLES (> 1cm), ABSCESSES (> 5cm) BOILS, FURUNCLES (deeper placed) ACNE, PIMPLES, folliculitis barbae.

Impetigo: School sores: Infections in the upper layers of the epidermis* do not scratch causes spreading - very contagious.

Itch: Erythema: Infections in the upper layers of the epidermis*.

Ecthyma: Infections in the full thickness or lower half of the dermis.

Necrotizing Fasciitis: Infections in the deep fascial layer invading muscle &/or bone - Emergency - needs IV ABs.

Abbreviations:

AB(s) antibiotic(s)
BF blood flow
DVT deep vein thrombosis
DM diabetes mellitus
DD differential diagnosis
IV intravenous
Mx management
N necrosis
P patients
Th healing
UV ultraviolet light

For more information call: 0410 01 8681 or email: medicalamanda@gmail.com

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AB09 3832465

INTEGUMENT: several specialized endings in the skin

GENERAL THERAPEUTIC TIPS

Topical for surface lesions - oral for mild cases - IV for serious cases ± hospital admission if necessary.

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