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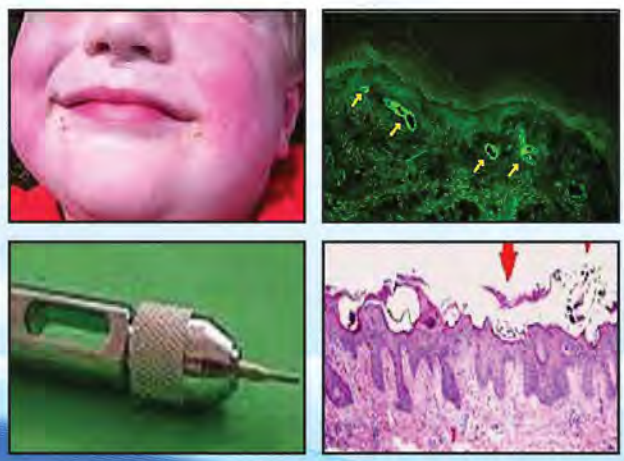
AimExcellence Series

DERMATOLOGY

Examinations Covered ==> NEET PG/AIPG, AIIMS, JIPMER, PGI, DNB, FMGE, State PGs, Nepal Medical Council Examination, FCPS Bangladesh, FCPS Pakistan, and a snapshot of overseas licensing examination questions for those willing to prepare for it.

- Chapterwise/topicwise scientifically and systemically important points are given
- Includes the related PICTORIALS that can be asked or have already been asked from the important topics in dermatology
- 10 pictorial MCQs (in line with the recent NBE pattern and AIIMS pattern examinations)
- 10 MRCP/USMLE pattern dermatology questions to give the flavor of the kind of questions asked and which can be answered from the points given in this book
- High-yield information from authentic references like Rook's/Fitzpatrick's/Neena Khanna's/Behl's Dermatology and Harrison's 19/e
- Highlighting lines and points in different colors for the aid of the readers
- Dermatology is no longer considered a small subject. 8/200 in AIIMS-MAY 2016 questions = 4% of total questions asked is an ample proof of this fact.



SnarayanM

JAYPEE

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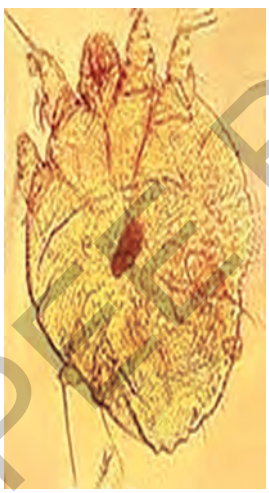
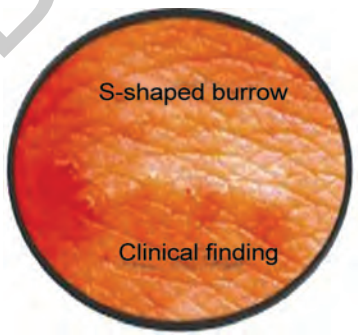
3 Scabies, Pediculosis and Fungal Infection

Scabies

- Sarcoptes/acarus scabei (female mite)** [MICRO]
- Children > adults**
- Risk factor → low socioeconomic strata** and overcrowding [PSM]
- Water-washed disease [PSM] → inadequate water/improper hygiene**
- Affect stratum corneum-** → burrow [pathognomic]**[path]**
- Burrow → S-shaped** → irregular grey-brown line++
- Incubation period → 4–6 wks**





Clinical Features:

- Severe **itching**** → most imp c/f (d/d w Atopic dermatitis**)
- Itching due to → **hypersensitivity** to scabin-saliva++
- **Papule and vesicle** → due to hypersensitivity
- Itching will take 3–4 wks of T/t ++ → **no need to reapply scabicides**
- **Pustules** → due to secondary infection
- Excoriation and scratch mark → s/e of itching
- **BURROW** → PATHOGNOMIC** → S-shaped → Grey-brown line++
- Burrow → difficult to demonstrate in children
- **CIRCLE OF HEBRA**** → involvement of → web space of finger → wrist → elbow → axilla → groin

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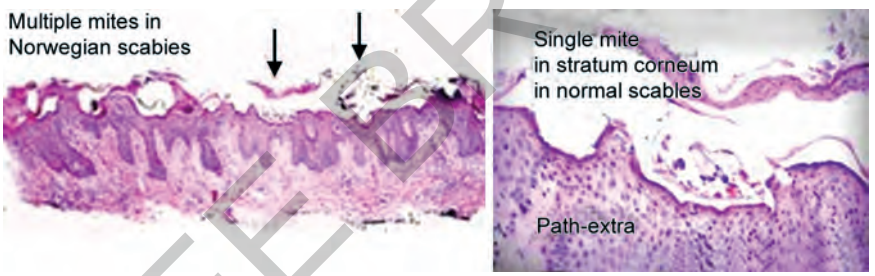
- Difference between ADULT and CHILD distribution of lesion
- **Child** → face, scalp, palm, sole** → affected
- Adult → spared
- **Norwegian scabies** → Crusted hyperkeratotic lesions → Most severe form
- **Mites** → thousands ++; Itching → not prominent++
- Nodular scabies → itchy nodule over penis and scrotum



- **T/t → [pharma and micro related info]^^**
- **PROPER BATH** → Apply scabicidal all over the body** (below jawline)++
- **Reapply** scabicides → after 7–10 d → to kill nymph and larvae from unaffected ova++
- [ova → larva → nymph → adult mite → 10 days++]
- Itching → **antihistaminic**; secondary infection → **antibiotics**
- Ordinary laundering of clothing
- **Mites die** in unworn clothes in 7 days
- Scabicides
- **Permethrin (5%)** → DOC**
  [act on parasites cell membrane → **prevent Na+ influx** → paralysis and death] [high yield new info ++]
- **Gammaxane/lindane (1%)** → 2nd DOC → **CAT–C** drug [++]
- Ivermectin → only oral drug → single dose → 200 mg/d → repeat after 14 d [MOA: → **GABA gated Cl– channel in PNS** → increase permeability of Cl– ions → hyperpolarization of nerve and muscle cell → paralysis and death]

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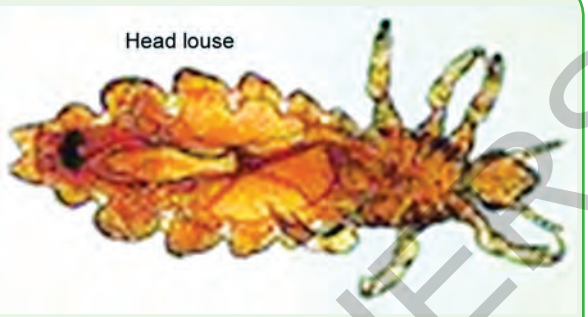
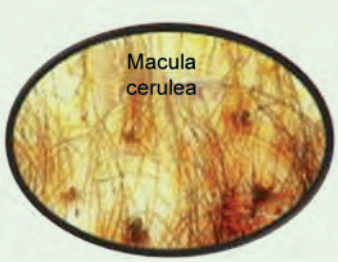
PEDICULOSIS (louse infection)



- 3 types
- Pediculosis humanis capitis (head louse) → infest skin++
- Peidculosis humanis corporis (body louse) → vagabond ds → infest fabric
- Pthirus pubis (crab/pubic louse) → infest skin++
- **Maculae cerulae++**
- In P. pubis and P. corporis**
- Blue–green macule → hemosiderin-stained purpuric spot → lice saliva → bilirubin → biliverdin = blue-green color++
- PATHOGNOMIC of lice infestation







- T/t
- **Body louse**
- Disinfection of clothes** (most imp)
  #tumble drying (most effective method)++
- Local drugs application
  Ac → permethrin ++ chronic → malathion++
- **Pediculosis capitis and pthirus pubis**
- Local application on body (more imp)++
- t/t of all sexual contact (in pthirus pubis)++
- Drugs → permethrin, malathion, lindane
- Eyelash → involved in pubic louse and not in head louse++

FUNGAL INFECTION	
SUPERFICIAL (CoPD)**	**DEEP** (CoSMoS)**
• Candidiasis	• Chromoblastomycosis
• Pityriasis versicolor	• Sporotrichosis
• Dermatophytes (Tinea)	• Mycetoma (Madura foot)
	• SC phycomycosis

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LAB diagnosis of FUNGAL INFECTION**	
• Pathogen in tissue microscopy	• Wet mounts after T/t with 10% KOH • Methenamine silver/PAS stain**
• Culture • Serology • PCR	 • Sabouraud's agar media** • Immunodiffusion, CFT, ELISA (ICE)++ • Detection of fungal DNA**

- DERMATOPHYTES
- Keratinophillic (no superficial dead keratin)

TRICHOPHYTON	HAIR, SKIN, NAIL
• Epidermophyton	Skin, nail (hair not affected)**
• Microsporum	Hair, skin (nails not affected)**
• Mnemonics	He Man (the power of universe)

BASED ON SOURCE OF INFECTION++
Anthrophillic → man to man → little inflammation
Zoophillic → animal to man → severe inflammation
Geophillic → soil fungi

Tinea capitis → MC in children**;
T. cruris/unguium/mannum → MC in adults++
Male > Female
DM/HIV/sterpoids/immunosuppressant → increase risk**

T. capitis → types; children > adults	
Ectothrix → outermost cuticle of hair	M. canis (MC) ++
Endothrix → Hair shaft involved	T. tonsurans (MC) ++
Ectothrix > endothrix → M. canis → MC (overall)**	

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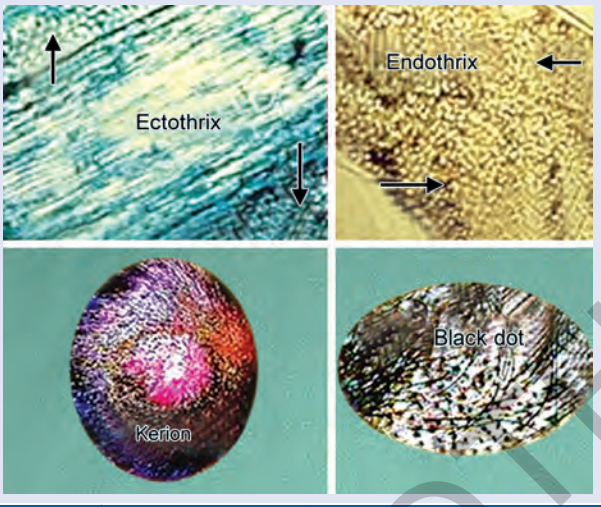

C/f of T. capitis	
Noninflammatory (anthrophillic)	• Scaly → peripheral scales+ • Black dot → T. tonsurans (MC) ++
Inflammatory (zoophilic)	• Kerion + lymphadenopathy (occipital) + pus discharge** • M. canis (MC) ++
Favus	• Scutula → Foul-smelling yellowish cup-shaped crust • T. schonleinii++

- T. cruris → dhobi's itch**
- MC in young adult male**
- Itching → prominent**
- Red scaly lesion**
- MC involvement → genital area and inner thigh**
- INDIA → MC cause → T. rubrum**
- Western countries → MC cause → E. floccosum++

- T. corporis (trunk and limbs)
- Mc site → waistline and axilla++
- Ring-like annular lesion → Ring-worm**



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- T. pedis (Athlete's foot)
- MC in summer
- MC in men wearing shoes
- Hyperhydrosis and variable itching
- 4 types
- Interdigital:

MC; between 4th and 5th toes > 3rd and 4th toes

- Mocassin (papulosquamous) 2nd MC involves sole
- Vesiculobullous midstep and ant planter surface
- Ulcerative least common type

- T. unguium
- FINGER AND TOE NAILS
- 2 types
- Distal subungual onychomycosis

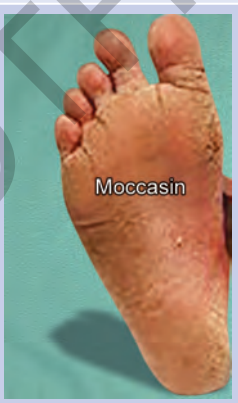
MC type of nails

Starts → distal edge of nail plate → grows inward → involves entire nail

Proximal subungual onychomycosis

Base of nail → entire nail





- T. incognito → inappropriate use of TOPICAL STEROID

T/t of dermatophytes	
1st line → TOPICAL**	Azoles, terbinafine, ciclopirox oleamine (Griseofulvin nerver used topically)**
2nd line (failure of topical) → systemic	Terbinafine (1st choice) > griseofulvin (2nd)
Duration of systemic therapy**	
Infected part	**Duration**
• Skin	• 3 wks
• Palm and sole	• 4–6 wks
• Fingernails	• 4–6 months
• Toe	• 8–12 months

Pityriasis (Tinea) Versicolor	Nondermatophytic fungi ++
Caused by	Pityrosporum ovale (Malassezia furfur) [MF Hussain – mnemonic]

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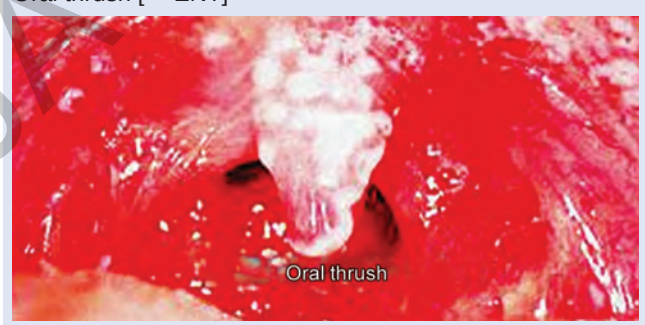
Usually affects	Young adults
C/f	• Scaly hypo > hyperpigmented lesion** • Recurrent • Furfuraceous/rice powder-like++ • Affect trunk and shoulder (chest and back)
Dx • 10% KOH • Wood's lamp • Skin surface biopsy	• Spaghetti and meatball appearance** • Apple green birefringence++ • Stratum corneum removed and stained with PAS++
T/t  	• Systemic Azole (DOC) [mnemonic → md. KaIF] Keto/itraconazole/fluconazole • Topical • Azole • Selenium sulfide • Whitefield ointment** (mnemonic → 36 SaB tv) 3% salicylic + 6% benzoic acid

CUTANEOUS CANDIDIASIS	C/B → CANDIDA ALBICANS
Candida prefers hot and humid environment	• Body fold and mucosa
Candida intertrigo	• Body folds • Erythematous plaque with satellite pustules • Fine scales at periphery • Groin axilla, submammary folds, toe and finger web
Candida paronychia	Chronic paronychia
Oral thrush [^^ ENT]  	• Candidal stomatitis • White creamy curd-like patch • Over oral mucosa and pharynx

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CUTANEOUS CANDIDIASIS	C/B → CANDIDA ALBICANS
Candidal vulvovaginitis [^^Obs-Gyne]	• MC fungal infection in DM • Young girls  • Pruritic, erythematous • Vulva, vagina
Candidal balanoposthitis [^^Sx]	• Shiny reddish area on prepuce and glans • Uncircumscribed men

T/t (candidiasis)	• Topical antifungal → clotrimazole/nystatin (DOC)** • Systemic → oral fluconazole/ketoconazole • Systemic candidiasis → Amphotericin B (DOC)**

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DERMATOLOGY

- Topicwise → HIGH YIELD + probably new info + pictorial Q
- Not only dermatology, related (microbiology + pathology + medicine + pediatrics + pharma + PSM + other subjects) discussion (in medicine, no subject is isolated, all related with each other)
- Recent NBE pattern: Relevant to AIPG/NEET + AIIMS + DNB + FMGE
- New important topics for AIIMS + JIPMER + PGI exams
- ** → Past Q in AIPG/AIIMS/DNB/STATE PGs
- ++ → High yield new info
- !! → Mnemonics
- ^^ → Exploring another subject from that topic in derma
- 2016 State PG Q → (ASSAM/WB/MAHARASHTRA/COMEDK/BIHAR/UPPG/Others) and 2016 MAY AIIMS/PGI and JIPMER Q included
- 10 Q TEST each on overseas licensing (USMLE/MRCP) and AIIMS/NBE pattern pictorial
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SnarayanM is a repeated ranker in All India and State PGMEE examinations, including NEET PG, AIPG, DNB, JIPMER, WBPG, and has many publications to his credit as first author in International journals. He is also the writer of many PGMEE books and has a passion for teaching, particularly for the competitive examinations in subjects related to the medical field.



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