STANDARD TREATMENT WORKFLOW (STW)

Dermatophytoses

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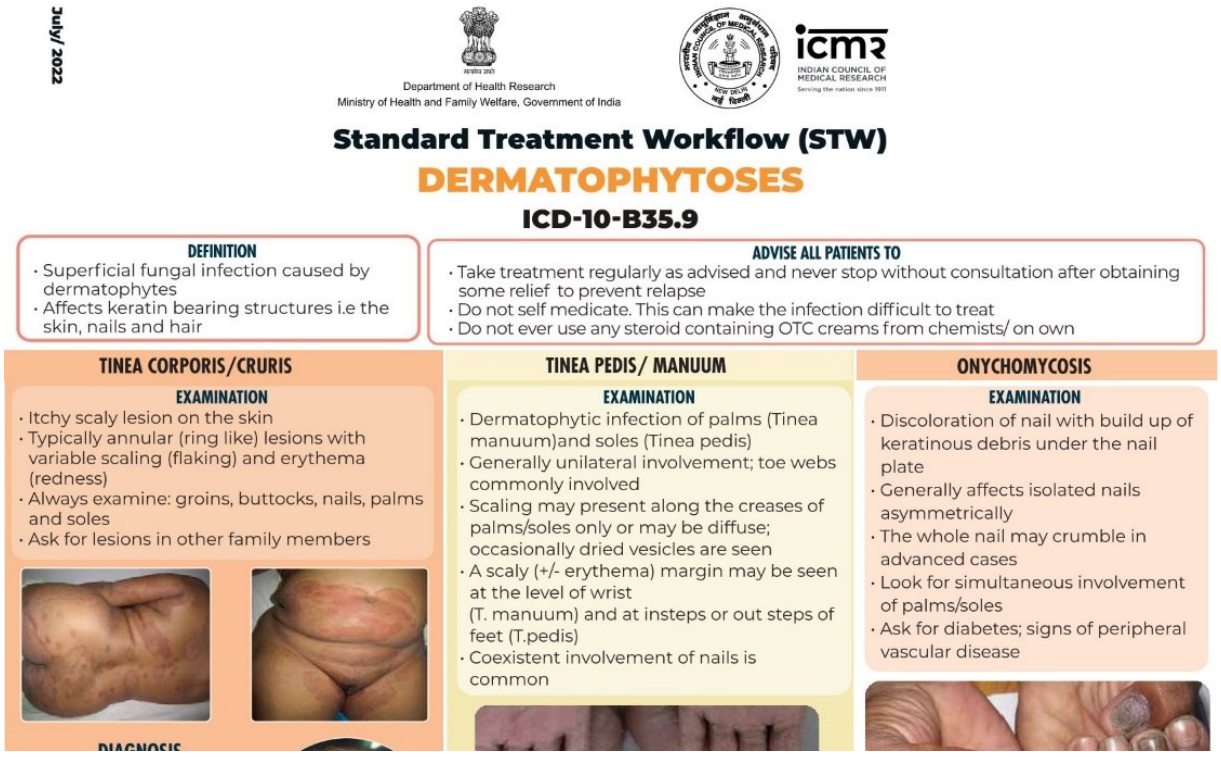

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Standard Treatment Workflow (STW)

DERMATOPHYTOSES

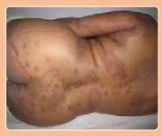
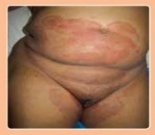
ICD-10-B35.9

DEFINITION
- Superficial fungal infection caused by dermatophytes
- Affects keratin bearing structures i.e the skin, nails and hair

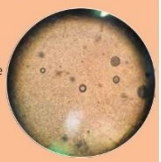
ADVISE ALL PATIENTS TO
- Take treatment regularly as advised and never stop without consultation after obtaining some relief to prevent relapse
- Do not self medicate. This can make the infection difficult to treat
- Do not ever use any steroid containing OTC creams from chemists/ on own

TINEA CORPORIS/CRURIS

EXAMINATION
- Itchy scaly lesion on the skin
- Typically annular (ring like) lesions with variable scaling (flaking) and erythema (redness)
- Always examine: groins, buttocks, nails, palms and soles
- Ask for lesions in other family members

DIAGNOSIS
- For doubtful cases: KOH microscopy of scales shows the typical septate hyphae
- Culture and other advanced methods are not required in routine practice



GENERAL MEASURES

ADVISE THE FOLLOWING DOS AND DONTS TO THE PATIENT

DOS	DON'TS
Take daily bath with regular bathing soap and normal temperature tap water	Do not share towels and clothes
Dry skin well after bath	Do not re-wear clothes before washing
Wash clothes separately in hot water and dry inside out in the sun	

TREATMENT

TOPICAL ANTIFUNGAL
- For limited involvement in cases of Tinea corporis and cruris
- USE
  - Clotrimazole 1%/2% cream BD
  - Miconazole 2% cream BD
  - Terbinafine 1% cream BD
  - Ketoconazole 2% cream BD
- For extensive disease,it is not feasible to use antifungal creams alone; advise oral antifungals

OR

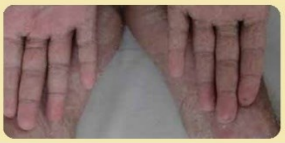
Advise anti fungal creams over most bothersome lesions only (in addition to systemic drugs)

TREATMENT IN CHILDREN
- Always look for infection in the parents/caregivers
- Prefer topical antifungals for younger children
- Oral antifungals (weight based dosing)
  - Terbinafine : 3-6mg/kg/day or
    <20kg : 62.5mg
    20-40kg : 125mg
    >40kg : 250mg
  - Fluconazole : 6mg/kg/day
  - Griseofulvin : 10-20mg/kg/day

REFER TO A SPECIALIST/ TERTIARY CENTRE IF
- Very extensive disease
- No/ minimal improvement with regular treatment after 4 weeks
- Cure not achieved despite prolonged treatment and good compliance
- Recurrent infection
- Co-morbid conditions present: Pregnancy/lactation/hepatic disease/renal disease or cardiac disease
- History of prolonged topical/ oral/parenteral/ steroid use
- **Remember:** The lesions are often modified by self application of topical steroids/ combination products
- The "ring" may be incomplete
- Scaling may be minimal
- Pigmentation may be prominent
- Do not use any steroid containing cream

TINEA PEDIS/ MANUUM

EXAMINATION
- Dermatophytic infection of palms (Tinea manuum)and soles (Tinea pedis)
- Generally unilateral involvement; toe webs commonly involved
- Scaling may present along the creases of palms/soles only or may be diffuse; occasionally dried vesicles are seen
- A scaly (+/- erythema) margin may be seen at the level of wrist (T. manuum) and at insteps or out steps of feet (T.pedis)
- Coexistent involvement of nails is common



GENERAL MEASURES
- Prolonged treatment is required;
- Treatment with adequate dosage for recommended duration should be adhered to
- **Advise patient to:**
  - Avoid walking barefoot in public places esp swimming pools/ community bathing areas
  - Wash feet with bathing soap and normal temperature tap water
  - Wipe and dry well with a towel
  - Dry toe clefts before wearing shoes/socks
  - Wear cotton socks
  - Wash worn socks separately in hot water

TREATMENT

SYSTEMIC TREATMENT
- ALWAYS TREAT TILL ALL LESIONS HAVE COMPLETELY RESOLVED
- This may take between 3-8 weeks or more depending on the extent of infection and previous treatments used; longer when palms/soles also involved or history of prolonged steroid use
- Follow up regularly every 2 weekly
- Oral antifungals for adults:
  - Tab Terbinafine 250mg BD
  - Tab Griseofulvin 500mg BD
  - Tab Fluconazole 50-150 mg OD
- **For relief of pruritus:** Tab Cetirizine 10mg HS or Tab CPM 4mg TDS

TREATMENT IN PREGNANCY
- Preferably use only topical antifungals
- Maximum safety data for use of
  - Miconazole cream
  - Clotrimazole cream
- Limited safety data in humans to recommend use of any systemic antifungal during pregnancy esp first trimester
- If required, fluconazole may be preferred

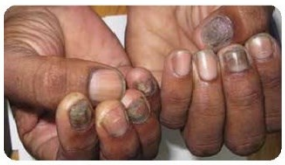
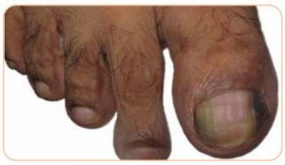
MANAGEMENT AT TERTIARY CARE
- Individualise treatment
- Treat till complete clinical and mycological cure (KOH negativity)
- Send for culture, speciation and antifungal susceptibility testing, if available

TOPICAL TREATMENT (OVER LIMITED AREAS ONLY)
- In addition to previously mentioned:
- Luliconazole cream topically OD
- Sertaconazole cream topically BD

SYSTEMIC TREATMENT
- Cap Itraconazole 100-200 mg/day
- Tab Terbinafine 250mg BD

ONYCHOMYCOSIS

EXAMINATION
- Discoloration of nail with build up of keratinous debris under the nail plate
- Generally affects isolated nails asymmetrically
- The whole nail may crumble in advanced cases
- Look for simultaneous involvement of palms/soles
- Ask for diabetes; signs of peripheral vascular disease

GENERAL MEASURES
- **ADVISE PATIENTS TO:**
  - Keep affected nails trimmed as they are fragile and trauma prone
  - Keep separate nail clippers
  - Avoid any cosmetic nail procedures, pedicure/manicure
- Inform the patient that it might take several months after treatment completion for a completely normal looking nail to appear and in severe cases, a cosmetically acceptable result may not be achieved

It is important to treat the nail infection as it is a potential focus for spread of the fungus to other body sites

TREATMENT

TOPICALS
- Limited disease with less than 50% nail surface involvement/ not going back till the lunula

OR
- Patients with contraindication for oral antifungals(eg. renal disease etc
- Amorolfine 5% nail lacquer application once a week or Ciclopirox 8% nail lacquer thrice a week

SYSTEMIC ANTIFUNGALS
- Tab Terbinafine 250mg BD (6 weeks for fingernails and 12 weeks for toenails)
- Cap Itraconazole 100 mg BD for 12 weeks

OR

200mg BD/day for seven days a month (2 such pulses for fingernails and 3 for toe nails)

ENSURE TREATMENT FOR ADEQUATE DURATION TO PREVENT RELAPSE