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|  | **Tinea versicolor**  [ pityriasis versicolor] | **Tinea Nigra** | **(piedra )**  Black Piedra | **(piedra)**    White Piedra |
| **Clinical Features** | -Brown or discolored, or white patches on skin. | - Macular brown lesions on palm [ T.N Palmaris] or sole [T.N plantaris] | -Firm nodules on hair- shaft -dark grown | -Loose nodule in hair- shaft  -Creamy |
| **Epidemiology** | -Found anywhere in the world.  -Affect any age and sex. | -Found in tropic and sub-tropic areas. | -Found in tropic and sub-tropic areas.  - not common in KSA | -Found in tropic and sub-tropic areas.  -Most common in KSA |
| **Source** | =Endogenous | =Exogenous by piercing | =Exogenous | =Exogenous |
| **Etiology** | Malassezia fur fur [pityrosporum  Orliculare]  - lipophilic Fungus | Pheoannellomyces werneckii  [exophiala werneckii] | -Piedraia Hortae | -Trichosporon beigelii |
| **Type of Fungus** | -Yeast  -Fast growing | -Dematiaceous imperfect mold  - slow growing | -Perfect mold  -Slow growing | -Imperfect yeast  -Fast growing |
| **Chronic or acute** | Chronic | Chronic | Chronic | Chronic |
| **Transmission of infection** | Not contagious | Not contagious | Not contagious | Not contagious |

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|  | **Rhinosporidiosis** | **Lobomycosis** | **Phaeohyphomycosis** | **Chromoblastomycosis ( chromo mycosis)** | **Sporotrichosis** |
| **Clinical Features** | +Mucocutaneous  - lesion: polyps, papilloma and wart- like. | - Cutaneous and subcutaneous.  -lesion: keloidal, Verrucoid, noclular. | -Subcuteness or cerebral  - Lesions are abcasses | - Subcutaneous  -lesion:  Hyperkeratatic verrucous. Pedenculus violaceaus, cauliflower | -Lympho coetaneous and subcuetaneous  -lesion: noclulor or ulcers, |
| **Source** | -Exogenous | -Exogenous | -Exogenous | -Exogenous | -Exogenous |
| **Type of Fungus** | -Parasitic Fungus | -Parasitic Fungus | -Dematiaceous imperfect modd Fungi | -Dematiaceous imperfect mold fungi | -Dimorphic  Imperfect fungi |
| **Etiology** | -Rhinosporidium Seeberi. | -Lacozia loboi  ( loboa loboi ) | 1)Cladosporium  2)Exophiala 3)wangiella  4)Cladophialophora bantiana. 5)Ramichloridium mackinziei  6) Bipolaris  7)Drechslera  8)Rhinocladiella | 1)Phialophora verrucosa.  2)Fonsecaea pedrosoi  3)Exophiala  4)Cladosporium | -Sporothrix schenckii |
|  |  | Chronic and localized |  | Chronic |  |
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|  | **Blastomycosis** | **Histoplasmosis**  **[cave Disease]** | **Coccidioidomycosis**  **[ valley Fever]** | **Paracoccidiodo- mycosis** |
| **Clinical**  **Features** | -Start as pulmonary, if not treated, it will disseminates to other organs  - interstitial( not intercellular)  - not self limiting  - primary infection | -Starts as respiratory -self – limiting  -Intracellular | -Starts as respirator if not treated.  >>>>disseminate  -Self limiting | Start as respiratory  + ulcers in buccal mucosa + lymphadenopathy |
| **Epidemidogy** | Common in US especially in states around Missisispi River | -Common in US  -Rare in KSA | -Endemic in southwestern U.S | -More seen in south America |
| Source | Exogenous | Exogenous |  |  |
| Type **of** Fungus | -Dimorphic:-  = **mold** in nature =**yeast** in human body .  -imperfect monileceous fungus - fast grawing | -Dimorphic  -Imperfect monilieceous fungi  - slow growning | -Dimorphic [ spherules]  -Imperfect monilieceous fungi | -Dimorphic  -Imperfect monilieceous fungi |
| **Chronic or a cute** | Chronic | Chronic |  |  |
| **Etiology** | -Blastomyces dermatitidis  \* perfect stage Ajellomyces- dermatitidis | -Histoplasma  Capsulatum.  \*Perfect stage  Ajellomyces-  capsulattus | -Coccidioides immitis | -Paracoccidioides  Brasiliensis |

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|  | **Pneumocystosis=**  **PCP** | **Candidiasis**  **[ candidosis]** | **Cryptococcosis** | **Trichosporonosis** | **Geotrichosis** |
| **Clinical**  **Features** | -Interstitial pneumonia  -Common in AIDS patient. | See page 53 | -Cause meningitis  And /or pulmonary | -Pulmonary  Infection | -Pulmonary  Infection |
| **Source** | -Contracted in childhood and appear in adult | Endogenous |  |  |  |
| **Type of**  **Fungus** | -Opportunistic | -Opportunistic  -Imperfect yeast fungi  -fast growing | -Opportunistic  -True yeast  -Encapsulated  -Fast growing | -Opportunistic  -Not true yeast  -Fast growing | -Opportunistic  -Not true yeast    -Fast growing |
| **Etiology** | -Pneumocystis  Carinii | 1)Candida albicans  2)c. glabrata  3)c. tropicalis  $)c. krusei  c. parapsilosis  **\* other yeast that may cause candidiasis:-**  1)saccharomyces  cerevisiae  2)trichosporon  beigellii  3) rhodotorula species | - Cryptococcus  Neoformans  \* perfect stage:-  Filobasidiella neoformans | - trichosporon beigelii | -geotrichum candidum |

**Zygomycosis [ phycomycosis]**

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|  | **Subcutaneous** | **Rhinocerebral**  **Mucoromycosis** | **Pulmonary** | **Gastrointestinal** | **Common**  **Features** |
| **Clinical**  **Features** | -Localized subcutaneous masses (cellutitis)  -No sinuses, No abscesses  -Rhinofacial is common site | - Paranasal sinusitis and  or late cellulites  - affect compromised patient with diabetes and ketoacidosis | **Similar to rhinocerebral**  **zygomycosis** | -Lesions are masses or abscesses in liver and interestine mainly.  - seen in children | Zycomycosis  Coused by  Zygomycete fungi two orders    1)Mucorales  2)Entomoph- thoraces  **\*All of them are**:-  1) monilieceous  Molds  2)Perfect  3)Non septate  4)Fast growing |
| **Source** | Exogenous | Exogenous | **Similar to rhinocerebral** | Exogenous |
| **Etiology** | 1)Conidiobolus coronatus  2)Basidiobolus  Ranarum **(both**  **Entomophthorales)**  3)Few mucorales | Rhizopus  Mucar  Albisidia  Rhizomucar  All of them are mucorales | **Similar to rhinocerebral** | Basidiobolus  ranarum |
| Chronic or a cute | Chronic | Acute, very serious and Fatal | Chronic or acute chronic | Chronic |
|  | -Non opportunistic  [primary pathogen] | -Opportunistic | -Opportunistic |  |

**\*Dermatophytoses\***

**[Cutaneous mycosis]**

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| **Clinical Features** | * Skin lesions with itching. – they affect both dead * Present anywhere in body. And living tissue, utilize * Infected hair fall off . keratin to grow. |
| **Epidemiology** | * Found everywhere in the world. * Affect adults and children [ more seen in school aged children] |
|  | * Chronic – contagious – exogenous from infected person and animals |
| **Type of Fungus** | * Imperfect moniliaceous mold fungi. [ primary pathogens ] |
| **Etiology**  **(3 genera )** | **1)Trichophyton [ 20spp] 2)Microsporum [17 spp]**  a) T. mentagrophytes  b) T, verrucosum zoophlic a)M. canis>> Zoophile, most common in KSA  c)T, violaceum  d) T. rub rum anthropophilic b)M. audouinii >> anthropophilic    \* all of them most common in KSA c)M. gypseum>> geophilic  \* infect skin and hair only **[ not nails]**  \* infect skin. Hair. Nails  **3)Epidermophyton floccosum**>>> anthropophilic   * Infect skin and nails **[ not hair]** * Common in KSA |
| Characteristics | 1. Produce alkaline substance. 2. Sensitive to griseofulvin. 3. Resistant to cyclohexamide 4. Have peculiar (special) hyphal structures. |

**Mycetoma**

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|  | **Eumycetoma** | **Anctiomycetima** |
| **Clinical Features** | -Localized subcutaneous infection that involve underlying bone later in the disease course.  - Main symptoms are:-  1) cold swelling. 2) formation of sinuses that drain pus 3) presence of grains with different colors.  - infection is a acquired following trauma to the skin. | |
| **Epidemiology** | - Found in tropics and subtropics  - Affect male and females but more seen in adult . | |
| **Source** | Exogenous. Exogenous | |
|  | -Very chronic. -Very chronic  -Not contagious. - Not contagious | |

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| **Etiology** | - Mold fungus  ــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــ  1)Madurela:  a) m. mycetomatis  – imperfect fungus.  - Black grains. – brown colony  b-)M. grisea  – imperfect dematieceous fungus.  - Black grains. – gray colony  2) a- pseudallescheria boydii  - perfect fungous  -white grain  b- scedosporium ampiospermum [imperfect]  -imperfect fungus  -white grains - moniliaceous  3) Pyrenochaeta  4)Acremonium  5)Leptospheria>> perfect  6) Neotestudina | -Filamentous higher bacteria [ gram positive ]  ـــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــــ   1. streptomyces somaliensis   -Yellow grains  - most common in KSA  2)Actinomadura Madurae  3)Actinomadura pelletieri  4)Norcardia brasiliensis  5) N. asteroids  6) N. caviae  7)N. coeliaca |