

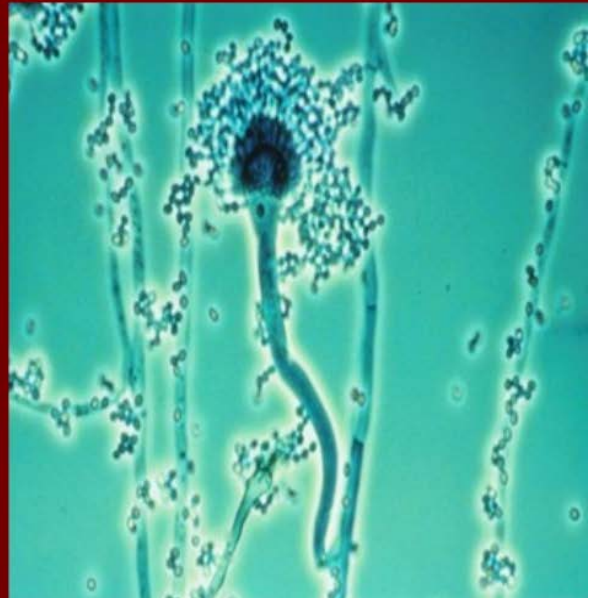
SYSTEMIC AND OPPORTUNISTIC MYCOSIS-1

Aspergillois

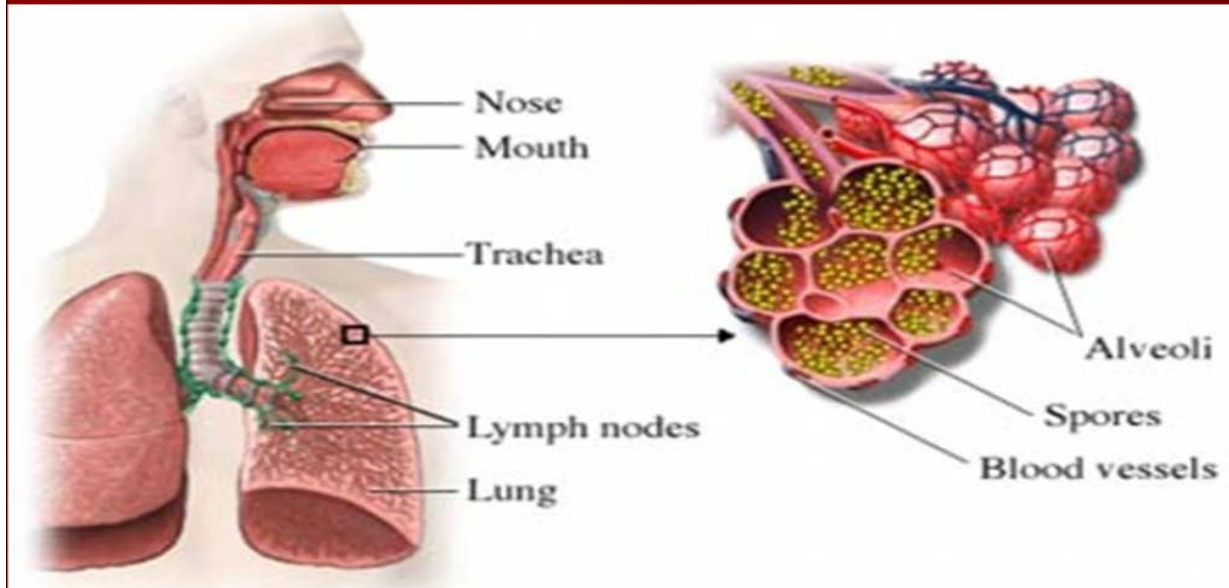
- In nature > 100 species of Aspergillois exist, Few are important as human pathogens
- 1 A.fumigatus
- 2 A.niger
- 3 A.flavus
- 4 A.terreus
- 5 A.nidulans

Morphology

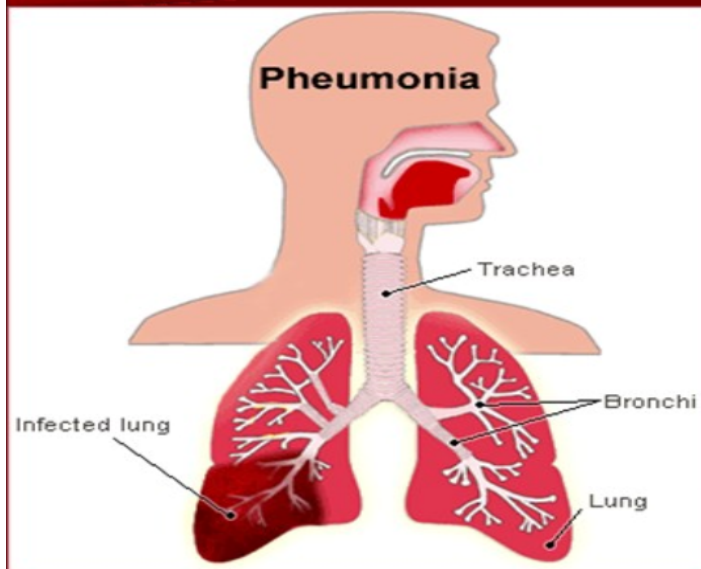
- Cultured as Mycelial fungus
- Separate hyphae with distinctive sporing structures
- Spore bearing hyphae – Conidiophores terminates in a swollen cell vesicle surrounded by one or two rows of cell (Sterigmata) from which chains of asexual conidia are produced



Fungal spores enters through respiratory tract



Pathogenesis



- **Aspergilloma** – A fungal ball, fungus colonize Preexisting (Tuberculosis) cavities in the lung and form compact ball of Mycelium which is later surrounded by dense fibrous wall presents with cough, sputum production
- **Haemoptysis** occurs due to invasion of blood vessels

Pathogenesis

- **Endocarditis** A rare complication
- Open heart surgeries are risk factors
- Poor prognosis
- **Paranasal granulomas**
- **Caused by** A.flavus, A.fumigtus may invade paranasal sinuses spread to bone to orbit of the eye, and Brain

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Pathogenesis - varied clinical presentations

- ***Allergic Aspergillosis*** – Atopic individuals, with elevated IgE levels
- 10-20% of Asthmatics react to *A.fumigatus*
- ***Allergic alveolitis*** follows particularly heavy and repeated exposure to larger number of spores
- ***Maltsters Lung*** – causes allergic alveolitis, who handle barley on which *A.claveus* has sporulated during malting process

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Mucormycosis

- Cellulitis causes extensive tissue destruction.
- Spread from Nasal mucosa to turbinate bone, paranasal sinuses, orbit, and Brain
- Rapidly fatal if untreated

