



Medical laboratory techniques

Assist lect: Shahad A.alrahman + Zahraa abdalameer + sara hashim

Lab 4



Serological and Skin tests.

Serological tests have now gained importance in mycology because of the rapidity of results and these tests can serve as a prognostic indicator.

Serological methods utilise the reactions and properties of the serum. The serological tests are done either to demonstrate antigen or antibody in serum or body fluids of suspected fungal infection

Serological tests in mycology

The specific immune response that results from exposure to cell wall, cytoplasmic extracellular fungal antigen during infection can be used for diagnosis. By monitoring this response, prognosis of disease and outcome of therapy can be assessed.

There are different serological tests :

- Agglutination
- Immunodiffusion (ID)
- Complement fixation test (CFT)
- Enzyme linked immunosorbent assay (ELISA)
- Lateral flow assay (LFA)
- Counter immuno-electrophoresis (CIE)
- Radio immunosorbent assay (RIA)

The advantages of serological tests in mycology are :

- To interpret the clinical significance of positive cultures – to rule out lab contamination
- To identify new isolate when the antibody is demonstrated against that particular antigen
- Rapid diagnosis
- Prognostic marker



Medical laboratory techniques

Assist lect: Shahad A.alrahman + Zahraa abdalameer + sara hashim

Lab 4



Types of Specimens for Fungal Infections:

1. Scrapings from the superficial parts of damage.
2. Biopsy - Feces – Urine – Sputum – CSF - Blood.

Isolation of fungi from hair, nail and skin

1. The direct plate method is used in isolating fungi.
2. Transfer sample (hair, nail and skin) after being flooded in 10% of KOH solution for 1-2 min to SDA containing of Cyclohexomide and Chloromenphenicol.
4. Incubate petri dish in 28°C for 7-21 days depending on the growth of fungus.



Isolation of fungi from Scrapings:

Isolation of fungi from scraping samples were directly cultured by putting scraping pieces over the agar plates. These plates then incubated at 30°C

Laboratory Diagnosis:

1. Direct examination
2. Fungal culture
3. Serological tests
4. PCR & other molecular methods.