

Cryptococcus neoformans

It is a yeast-type fungus that causes **cryptococcosis** (*a generalized disease affecting several organs*).^[1]

Morphology

Cells 5-15 µm in size are **spherical in shape** and propagate by budding. They do not form pseudohyphae. On the cell surface, there is a wide **mucus sheath**, which is an important factor in virulence because it protects the cryptococcus from phagocytosis.

Epidemiology


Cryptococcus is a common saprophyte in soil, plants and a number of animal hosts. Typical sources of infection are the **nest of birds and their droppings** (mainly pigeons). A person is most often infected by inhaling an unencapsulated fungus, sometimes through Skin (benign form).

Pathogenesis

The disease it causes is called cryptococcosis.

These can be:

- primary mycosis in healthy individuals,
- secondary mycosis (often in patients with AIDS).

 It is at the front site among the infirmity of mycotic complications in individuals with AIDS.

They have primarily affected lungs, dangerous hematogenous spread to various organs is dangerous. A serious and typical localization is CNS.

Laboratory diagnostics

Depending on the form of the disease, we examine cerebrospinal fluid, sputum, urine or blood culture. Microscopically, we see typical budding cells with a wide capsule. Antibodies are minimally produced, serological testing is therefore irrelevant.

Cultivation

They are not cultivation demanding. They grow for 5-10 days at 37 ° C and 20 ° C. On Sabourad's land, they grow in the form of *yellow and strikingly shiny colonies*.

Treatment

We administer antifungals (amphotericin B, fluconazole).

Links

Related articles

- Yeast
- Findings in the oral cavity in infectious diseases
- Invasive fungal infections

References

1. ROSYPAL, Stanislav. *Bakteriologie a virologie*. 1. edition. 1994. ISBN 80-85827-16-6.

Sources

BEDNÁŘ, M. *Lékařská mikrobiologie*. 1. edition. 1996. ISBN 80-238-0297-6.