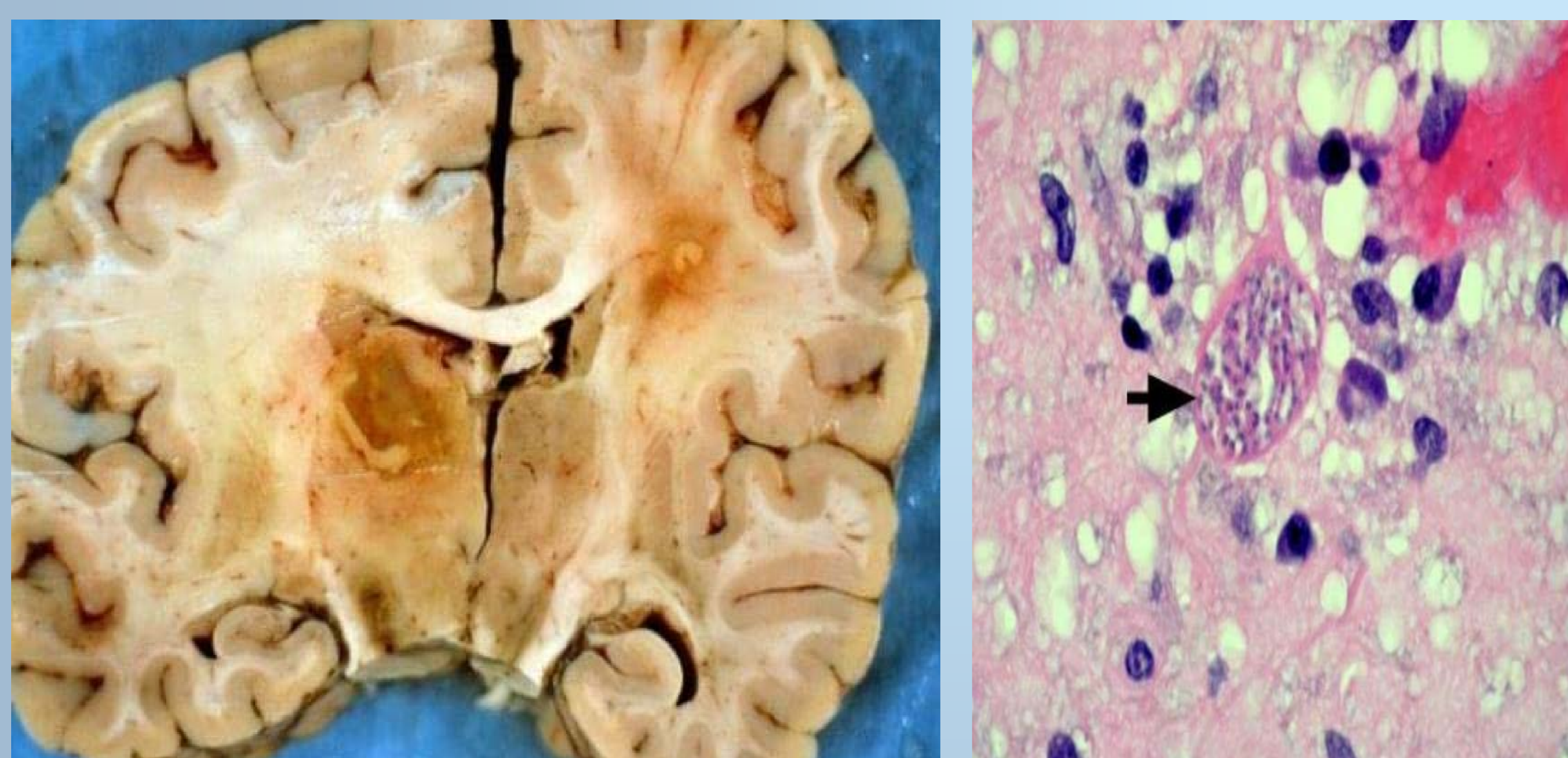
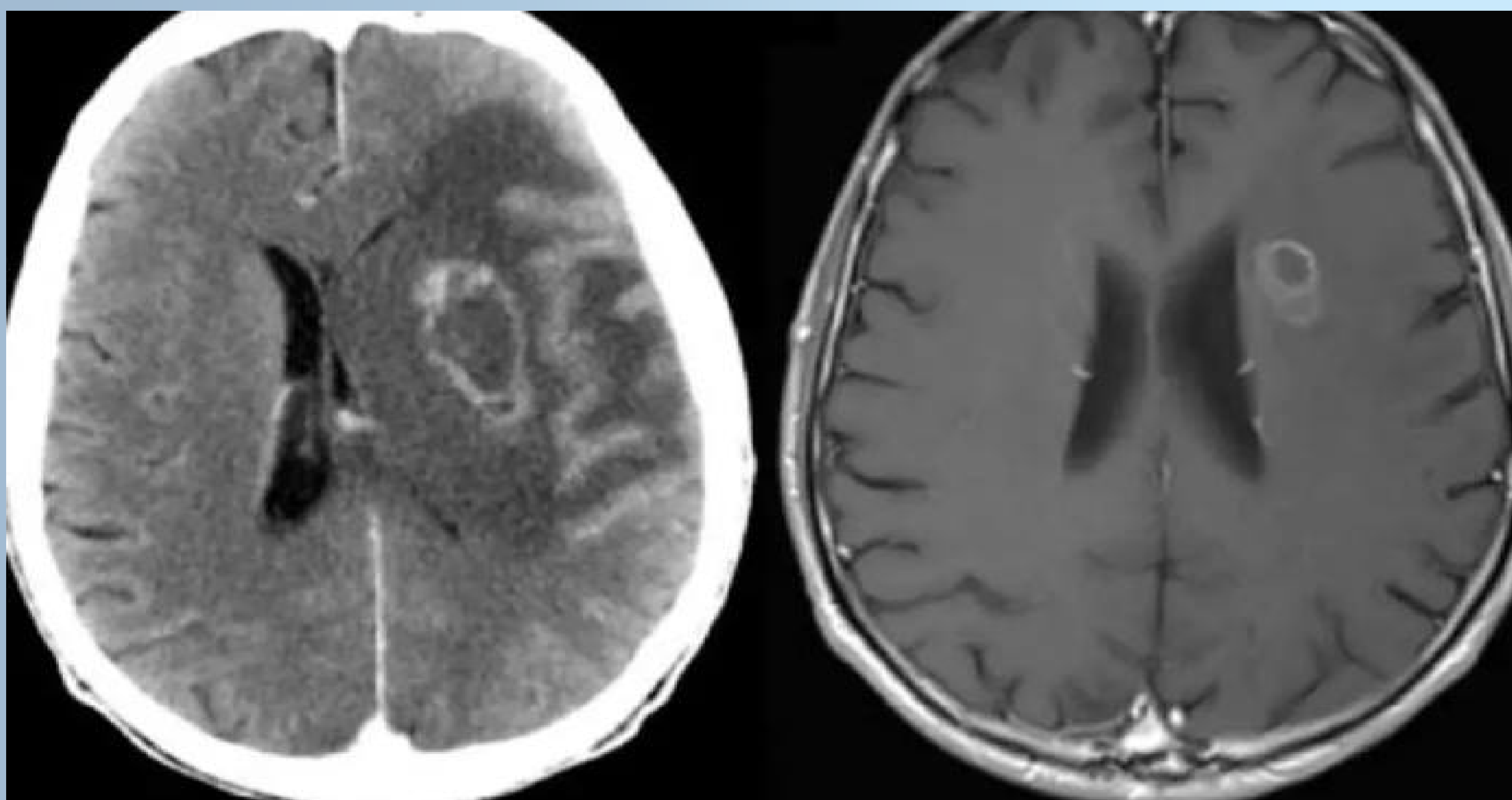
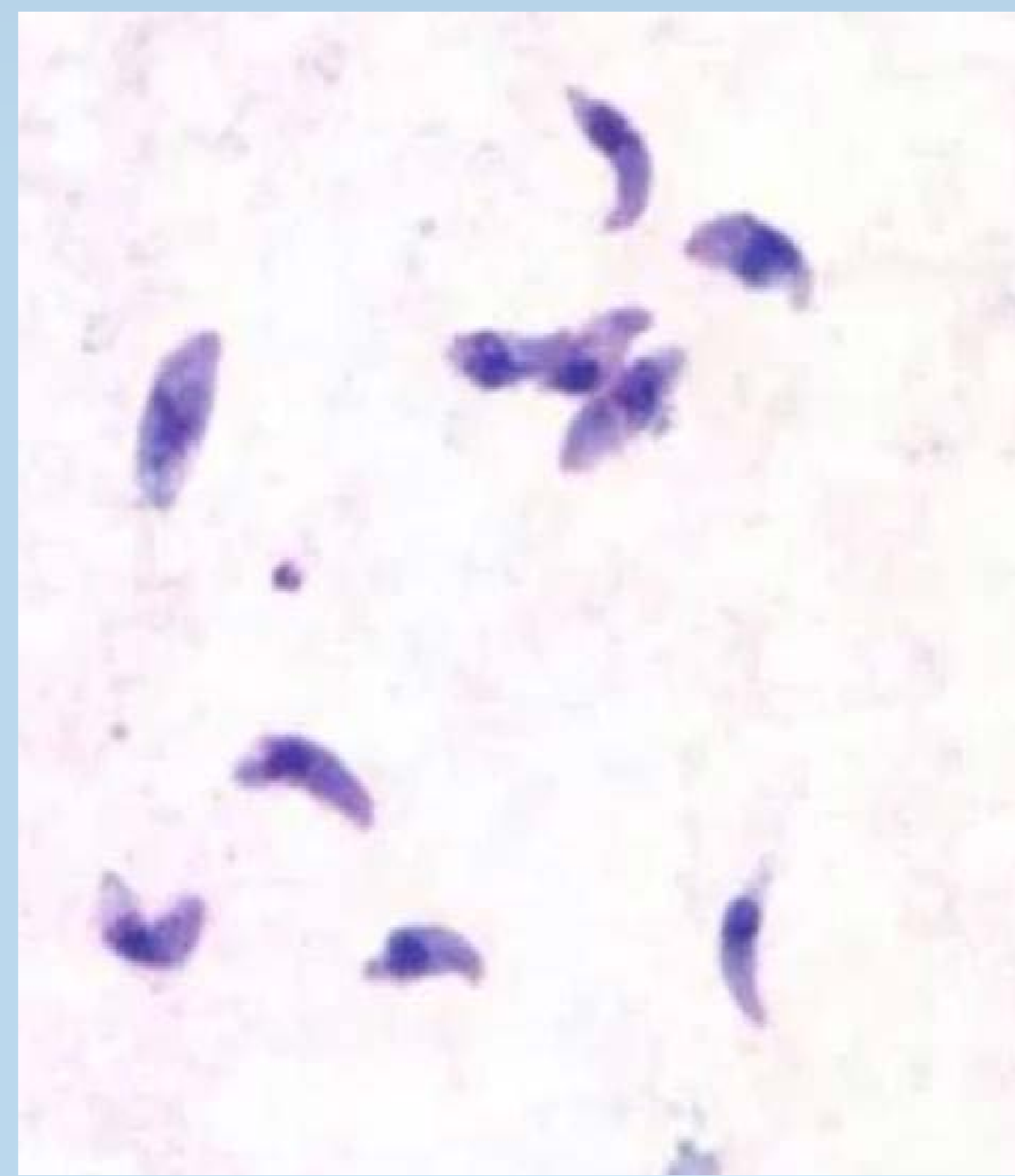
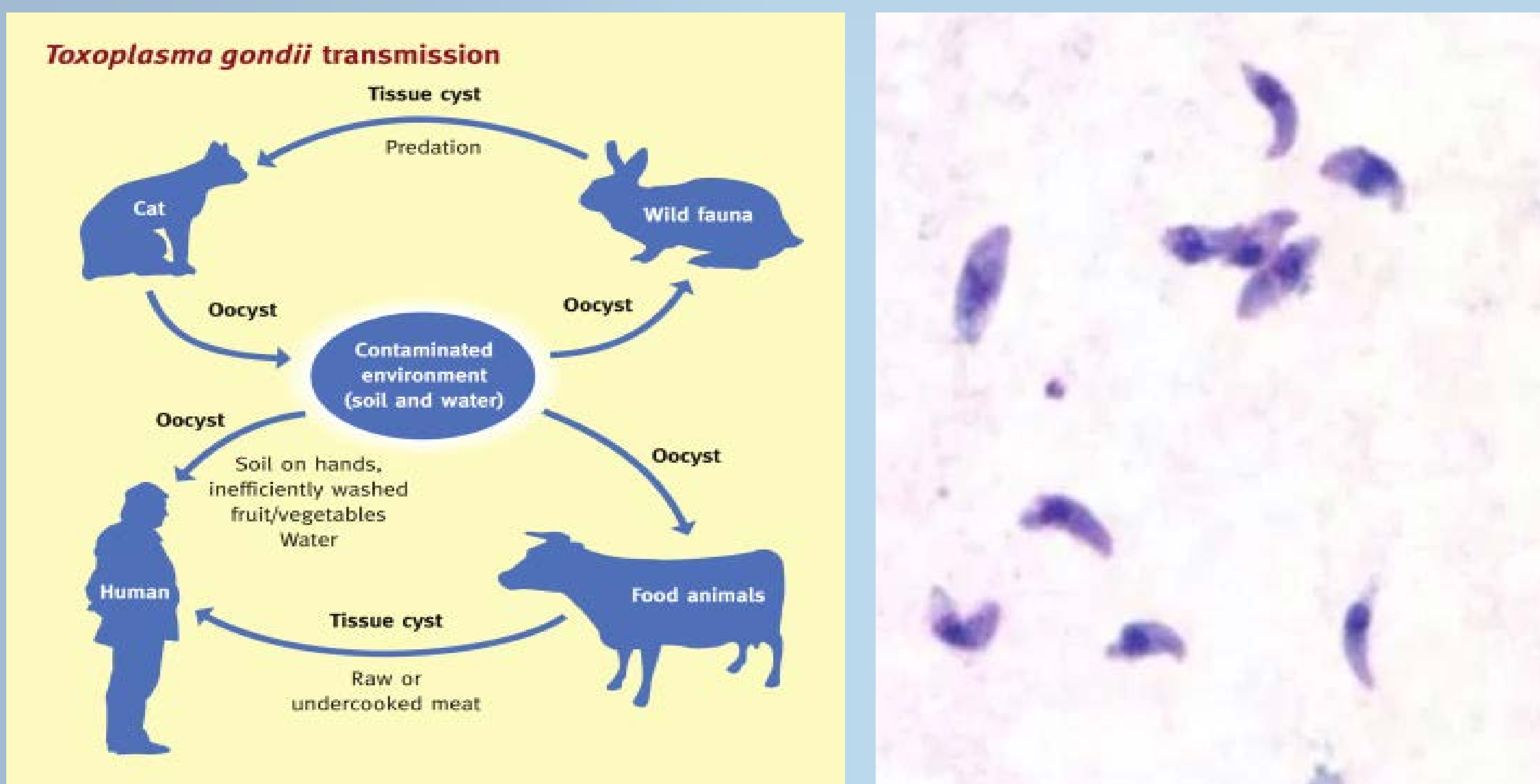


HIV associated Toxoplasmosis encountered in Neurosurgical practice in Sri Lanka

D P C K A Lal
National Hospital of Sri Lanka

BACKGROUND

Toxoplasmosis is an invasive parasitic infestation of zoonotic origin, caused by *Toxoplasma gondii* which is transmitted through contaminated food. Cell mediated immunity keeps the parasite within tissue cysts preventing the clinical disease. When the CD4 count drops below 200/microliter, the opportunistic infection become active. HIV is the well known predisposing factor and HIV screening is recommended in all patients with Toxoplasmosis.



Limited amount of data available is suggestive of a high seroprevalence of toxoplasma in Sri Lanka. But, due to the low occurrence of HIV (estimated to be less than 0.1% among adults), Toxoplasmosis remains an uncommon clinical entity.

PURPOSE AND HYPOTHESIS

As the HIV / AIDS is increasing in Sri Lanka, the opportunistic infections are expected to rise. The objective of this study is to describe a case series of HIV associated toxoplasmosis encountered in Neurosurgical practice in Sri Lanka.



MATERIALS AND METHODS

5 cases of Toxoplasmosis of the central nervous system were encountered during a period of one year.

1. 42 year old female presenting with encephalitic picture found to have a mass in the right frontal lobe.
2. 22 year old male presenting with acute paraplegia found to have a intramedullary mass lesion suggestive of gliotic lesion at T11.
3. 46 years old male patient with chronic headache followed by acute deterioration of consciousness found to have multiple space occupying lesions suggestive of gliotic lesions in the brain.
4. 34 year old male patient who has been treated for cerebral toxoplasmosis presenting with gradual deterioration of consciousness found to have hydrocephalus.
5. 58 year old male with gradual para-paresis found to have a cystic lesion suggestive of glioblastoma in the thalamic region.

RESULTS

Three patients with mass lesions were diagnosed as toxoplasmosis intraoperatively by frozen section biopsy and treated with pyrimethamine / sulfadiazine. The patient with the cystic lesion had high titers of anti-toxoplasma antibodies though the histology was inconclusive, and responded to pyrimethamine / sulfadiazine. Patient with the hydrocephalus had no evidence of active infection and treated with ventriculo-peritoneal shunting. All patients were positive for HIV screening and three patients were referred for antiretroviral therapy following confirmation.

CONCLUSIONS

All patients with central nervous system Toxoplasmosis should be investigated for HIV. Mass lesions should undergo frozen section biopsy during Neurosurgery to exclude Toxoplasmosis mimicking neoplastic lesions.

REFERENCES

1. Anuradha B. Toxoplasmosis in HIV infection: An overview. Trop Parasitol. 2016;6(2):129-135.
2. Porter SB, Sande MA. Toxoplasmosis of the central nervous system in the acquired immunodeficiency syndrome. NEngl J Med. 1992;327:1643-8.
3. Rant IH, Gold JW, Rosenblum M, Niedzwiecki D, Armstrong D. Toxoplasma gondii serology in HIV-infected patients: The development of central nervous system toxoplasmosis in AIDS. AIDS. 1990;4:519-21.
4. Iddawela et al. Seroprevalence of toxoplasmosis and risk factors of Toxoplasma gondii infection among pregnant women in Sri Lanka: a cross sectional study. BMC Public Health (2017) 17:930.
5. http://www.aidscontrol.gov.lk/images/pdfs/publications/programme_plans/road_map_to_ending_aids_in_sri_lanka.pdf