

Quiz: Parasites Affecting CNS and Special Senses

1. Which of the following is the causative agent of Primary Amoebic Meningoencephalitis (PAM)?

- a) *Acanthamoeba castellanii*
- b) *Naegleria fowleri*
- c) *Onchocerca volvulus*
- d) *Taenia solium*

Answer: b) *Naegleria fowleri*

2. What is the main mode of infection for *Naegleria fowleri*?

- a) Ingestion of contaminated food
- b) Inhalation of contaminated air
- c) Through the nasal route from contaminated water
- d) Bite of an infected insect

Answer: c) Through the nasal route from contaminated water

3. Which parasite is responsible for granulomatous amoebic meningoencephalitis (GAM)?

- a) *Naegleria fowleri*
- b) *Trypanosoma brucei*
- c) *Acanthamoeba castellani*
- d) *Taenia solium*

Answer: c) *Acanthamoeba castellani*

4. What is the infective stage of *Naegleria fowleri*?

- a) Cyst
- b) Amoeboid trophozoite
- c) Flagellate trophozoite
- d) Both b and c

Answer: d) Both b and c

5. How does *Acanthamoeba castellani* enter the human body?

- a) Through the nasal route
- b) Through the skin, lungs, and eyes
- c) Through contaminated food
- d) Through mosquito bites

Answer: b) Through the skin, lungs, and eyes

6. Which condition is associated with *Acanthamoeba castellani*?

- a) Primary Amoebic Meningoencephalitis
- b) Amoebic keratitis
- c) Neurocysticercosis
- d) Onchocerciasis

Answer: b) Amoebic keratitis

7. What is the most effective treatment for Naegleria fowleri infections?

- a) Metronidazole
- b) Albendazole
- c) Amphotericin B
- d) Chloroquine

Answer: c) Amphotericin B

8. What is the diagnostic method for detecting Naegleria fowleri in cerebrospinal fluid (CSF)?

- a) Culture on blood agar
- b) CSF examination by lumbar puncture
- c) ELISA test
- d) X-ray imaging

Answer: b) CSF examination by lumbar puncture

9. Which parasitic infection is associated with corneal ulcers and keratitis in contact lens users?

- a) Naegleriasis
- b) Onchocerciasis
- c) Acanthamoeba keratitis
- d) Neurocysticercosis

Answer: c) Acanthamoeba keratitis

10. Which parasitic disease results in "river blindness"?

- a) Naegleriasis
- b) Neurocysticercosis
- c) Onchocerciasis
- d) Amoebic keratitis

Answer: c) Onchocerciasis

11. What is the infective stage of Taenia solium that causes Neurocysticercosis?

- a) Trophozoite
- b) Cysticercus cellulosae
- c) Adult worm
- d) Larvae

Answer: b) Cysticercus cellulosae

12. How can Neurocysticercosis be diagnosed?

- a) CSF analysis
- b) MRI and CT scans
- c) Blood culture
- d) Stool microscopy

Answer: b) MRI and CT scans

13. What is the main mode of transmission for Neurocysticercosis?

- a) Inhalation of airborne cysts
- b) Eating contaminated pork or food with *Taenia solium* eggs
- c) Swimming in contaminated water
- d) Insect bites

Answer: b) Eating contaminated pork or food with *Taenia solium* eggs

14. What is the treatment of choice for Neurocysticercosis?

- a) Metronidazole
- b) Amphotericin B
- c) Praziquantel and corticosteroids
- d) Rifampicin

Answer: c) Praziquantel and corticosteroids

15. Which parasite can cause secondary amoebic cerebral abscess?

- a) *Naegleria fowleri*
- b) *Entamoeba histolytica*
- c) *Acanthamoeba castellani*
- d) *Onchocerca volvulus*

Answer: b) *Entamoeba histolytica*

16. What is the main clinical feature of Primary Amoebic Meningoencephalitis (PAM)?

- a) Gradual onset of symptoms over months
- b) Rapid onset with severe headache, fever, and altered mental status
- c) Skin ulcers with fever
- d) Chronic cough with hemoptysis

Answer: b) Rapid onset with severe headache, fever, and altered mental status

17. What is a key difference between Naegleria fowleri and Acanthamoeba castellani infections?

- a) Naegleria fowleri only affects the skin
- b) Acanthamoeba castellani causes a chronic infection, whereas Naegleria fowleri is more acute
- c) Naegleria fowleri can be transmitted by mosquitoes
- d) Acanthamoeba castellani has no cyst stage

Answer: b) Acanthamoeba castellani causes a chronic infection, whereas Naegleria fowleri is more acute

18. Which of the following is a major preventive measure for Naegleria fowleri infections?

- a) Proper hand hygiene
- b) Avoiding swimming in stagnant or warm freshwater
- c) Mosquito control
- d) Cooking meat thoroughly

Answer: b) Avoiding swimming in stagnant or warm freshwater

19. What is the primary mode of infection for Acanthamoeba castellani in the eye?

- a) Ingestion of contaminated water
- b) Contact lens contamination with stagnant water
- c) Mosquito bites
- d) Fecal-oral transmission

Answer: b) Contact lens contamination with stagnant water

20. What is the key pathological effect of Neurocysticercosis on the CNS?

- a) Formation of granulomas with spiky trophozoites
- b) Space-occupying lesions leading to seizures and headaches
- c) Demyelination of neurons
- d) Destruction of motor neurons

Answer: b) Space-occupying lesions leading to seizures and headaches

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Quiz: Parasites Affecting CNS & Special Senses

1. A patient traveled to Africa and was exposed to insect bites. He developed enlarged lymph nodes, cognitive deterioration, and sleepiness. What is the most likely parasitic diagnosis?

- a) Primary amoebic meningoencephalitis
- b) African trypanosomiasis
- c) Onchocerciasis
- d) Secondary amoebic meningoencephalitis
- e) Neurocysticercosis

Answer: b

2. What is the infective stage of *Trypanosoma brucei*?

- a) Amastigote
- b) Promastigote
- c) Metacyclic trypomastigote
- d) Trypomastigote with a free flagellum
- e) Intermediate trypomastigote

Answer: c

3. What is the vector of African trypanosomiasis?

- a) Sandfly
- b) Tsetse fly
- c) Anopheles mosquito
- d) Black fly
- e) Reduviid bug

Answer: b

4. What is Winterbottom's sign in African trypanosomiasis?

- a) Enlarged posterior cervical lymph nodes
- b) Severe headache
- c) Photophobia
- d) Convulsions
- e) Rash

Answer: a

5. Which of the following is the main cause of river blindness?

- a) *Trypanosoma brucei*
- b) *Onchocerca volvulus*
- c) *Taenia solium*
- d) *Acanthamoeba castellanii*
- e) *Naegleria fowleri*

Answer: b

6. Which of the following is NOT a mode of transmission for African trypanosomiasis?

- a) Blood transfusion
- b) Organ transplantation
- c) Congenital transmission
- d) Contaminated food and water
- e) Tsetse fly bite

Answer: d

7. What is the characteristic early ocular finding in *Onchocerca volvulus* infection?

- a) Keratitis
- b) Conjunctivitis with photophobia
- c) Retinitis
- d) Optical atrophy
- e) Uveitis

Answer: b

8. What is the primary pathological effect of *Onchocerca volvulus* in the eye?

- a) Neuronal degeneration
- b) Hemorrhage
- c) Inflammation and fibrosis
- d) Anaemia
- e) Vasculitis

Answer: c

9. What is the diagnostic stage of *Onchocerca volvulus*?

- a) Egg in the stool
- b) Cyst in the brain
- c) Microfilaria in skin snip biopsy
- d) Trophozoite in blood
- e) Trypomastigote in CSF

Answer: c

10. What is the treatment of choice for microfilaria in Onchocerciasis?

- a) Suramin
- b) Ivermectin
- c) Melarsoprol
- d) Amphotericin B
- e) Albendazole

Answer: b

11. What is the main target organ in late-stage African trypanosomiasis?

- a) Liver
- b) Spleen
- c) Brain
- d) Lungs
- e) Heart

Answer: c

12. What are the characteristic inflammatory cells seen in CNS infection of *Trypanosoma brucei*?

- a) Plasma cells
- b) Morula cells of Mott
- c) Neutrophils
- d) Eosinophils
- e) Giant cells

Answer: b

13. Which of the following parasites can cause neurocysticercosis?

- a) *Taenia solium*
- b) *Naegleria fowleri*
- c) *Trypanosoma brucei*
- d) *Onchocerca volvulus*
- e) *Plasmodium falciparum*

Answer: a

14. What is the treatment for late-stage African trypanosomiasis?

- a) Suramin
- b) Pentamidine
- c) Melarsoprol
- d) Ivermectin
- e) Metronidazole

Answer: c

15. Which of the following is a free-living amoeba that can cause keratitis?

- a) *Naegleria fowleri*
- b) *Acanthamoeba castellanii*
- c) *Entamoeba histolytica*
- d) *Plasmodium vivax*
- e) *Trypanosoma cruzi*

Answer: b

16. What is the mode of transmission of *Onchocerca volvulus*?

- a) Tsetse fly bite
- b) simulium fly bite
- c) Mosquito bite
- d) Contaminated water
- e) Airborne droplets

Answer: b

17. How do Trypanosoma brucei parasites enter the CNS?

- a) Through the bloodstream and bone marrow
- b) Through the nasal cavity
- c) By crossing the blood-brain barrier
- d) By infecting lymph nodes
- e) Through the gastrointestinal tract

Answer: c

18. What is the main site of the Trypanosoma brucei parasite in early infection?

- a) CNS
- b) Red blood cells
- c) Peripheral blood
- d) Skeletal muscle
- e) Kidney

Answer: c

19. What is the characteristic morphological form of Trypanosoma brucei in humans?

- a) Cyst
- b) Amastigote
- c) Promastigote
- d) Trypomastigote
- e) Oocyst

Answer: d

20. What is the primary method for diagnosing African trypanosomiasis?

- a) Stool examination
- b) PCR
- c) Giemsa-stained blood smear
- d) Serology
- e) Skin biopsy

Answer: c