

Parasitology

[lab-9\(B.coli+Toxoplasma\)](#)

1- Balantidium coli

1- risk group :: farmers and people deals with farm product directly

2- Morphology ::

Trophozoite	Cyst
50-200 micron {largest protozoa infect man}	40-50 micron
Oval or bag shape	Spherical shape
Ciliated	Ciliated
Has phagosome	No phagosome
Kidney shape macro-nucleus	Kidney shape macro-nucleus
spherical shape micro-nucleus	spherical shape micro-nucleus
Retractile food vacuoles	Retractile food vacuoles

3- B.coli present mainly in pigs and can be present in cattle

4- rare in our society

5- route of infection :: contaminated food and water from the farm by oral route

6- B.coli is the only ciliated parasite that infect human

7- the cyst contain thick wall for resistance of environmental factors

8- habitat :: large intestine of man and animals (mainly cecum)

9- diagnostic stage : cyst +/- trophozoite

10- infective stage : cyst

11- animals are reservoir for B.coli

12- it cause dysentery like that of E.histolytica but can not cause extra-intestinal disease

13- it cause acute illness in man but lead to death if it cause perforation of large intestine and the normal flora of the large intestine invade the peritoneum and cause acute abdomen

14- stool examination for cyst and trophozoite but in E.histolytica we see trophozoite

15- treatment :: tetracycline

16- under the microscope we see:: 1-foad vacuoles 2- macronucleus 3- micronucleus

2- Toxoplasma gondii

- 1- common disease in our society (40% to 50 % of people affected)
 - 2- it is a benign parasite in immune-competent people but can cause death in immune-deficient people and in fetus
 - 3- toxoplasma is intracellular parasite so it is more resistance to drug and cause more sever disease than extracellular parasite
 - 4- tachyzoite :: present in the blood ,, has apecomplexia that is important receptor for the target cells + nucleus
 - 5- bradyzoite :: present in skeletal mucle and C.N.S and it affect any nucleated tissue ,, it present in the tissue cyst
 - 6- oocyst :: oval shape ,, two sporocyst (each contain 4 sporozoite)
 - 7- acute phase of disease caused by → tachyzoite (7-20 days of parasitemia)
 - 8- chronic phase of disease caused by → bradyzoite (for years)
 - 9- habitat : 1-tachyzoite in blood 2- bradyzoite in Skeletal M. and C.N.S
 - 10- definitive host ::: cat
 - 11- intermediate host :: man + any animal (mammals – birds)
 - 12- infective stage : all stages could be infective as follow :
 - Oocyst → ingestion of contaminated food and water
 - Tissue stage → ingestion of infected meat - organ transplantation
 - Tachyzoite → raw goat milk – blood transfusion – congenital
 - 13- diagnosis :: the best diagnosis is serological tests and it is the only test used in clinical diagnosis
 - 14- it cause abortion and congenital anomalies in fetus if the mother infected during the pregnancy of before it for short time
 - 15- treatment :: spiriromycin – pyrimethamine
- :::المطلوب في هذا المختبر :::

1- **B.coli ----- (cyst and trophzoite)** >> التفريق بينهما غير مطلوب kidney shape nucleus and contractile food vacuoles

2- **Tachyzoite of toxoplasma** ((similar to the gametocyte of malaria but in malaria both anterior end and posterior end either rounded or pointed >> in toxoplasma one of the end is rounded and the other is pointed))