

LAB-10- PARASITOLOGY

Submitted by
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Balantidium Coli

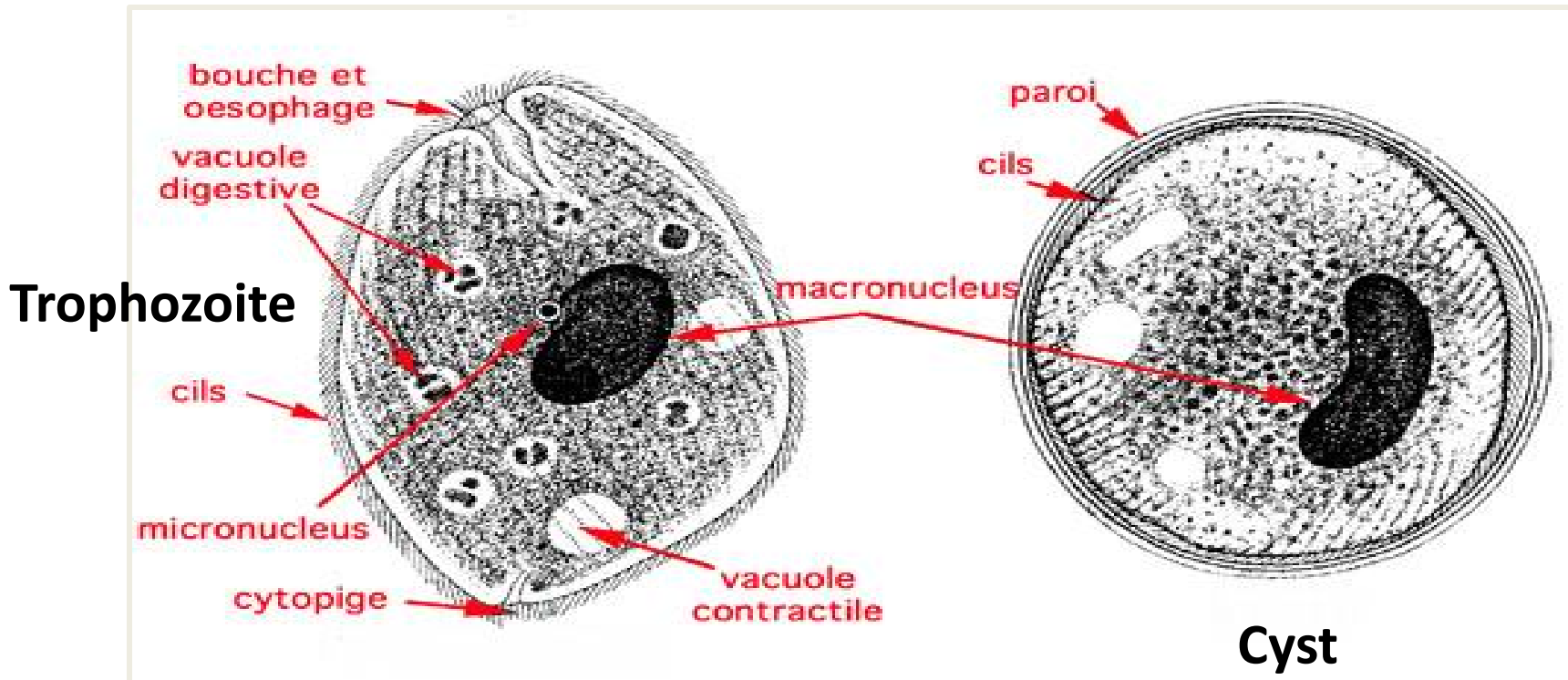
Diseases. Balantidiasis, balantidiosis, balantidial dysentery ,*B. coli* is the only member of the ciliate group that is pathogenic for humans, it is found in large intestine (cecum and ileum), Disease produced by *B. coli* is similar to amebiasis, because the organisms elaborate proteolytic and cytotoxic material . Close association ,between man and pigs

- *B. coli* is the largest intestinal protozoan of humans.
- the life cycle which can be divided into two stages Trophozoite and Cyst.

- **Laboratory Diagnosis**
- Microscopic examination of faeces for trophozoite and cysts is performed. The
- trophozoite is very large, varying in length from 50 to 200µm and in width from 40
- to 70µm. The surface is covered with cilia.

Trophozoite

- The size between 40 x 120 Mm ,ovoid in shape
- have cytostome locate at the anterior end as funnel-shape
- The body is covered with cilia
- Have Flattened on one side
- two nuclei,Macronucleus locate in the middle of the body may be kidney shape, micronucleus is spherical and small ,lies close to the macronucleus
- Food vacuoles and contractile may be seen in the cytoplasm.

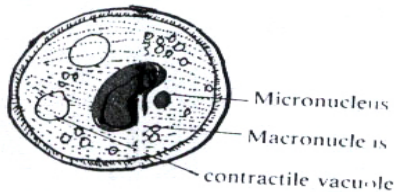


Cyst

- The Size 50 x 75 Mm
- Have thick wall
- The macronucleus can be seen
- Other structure are not observed

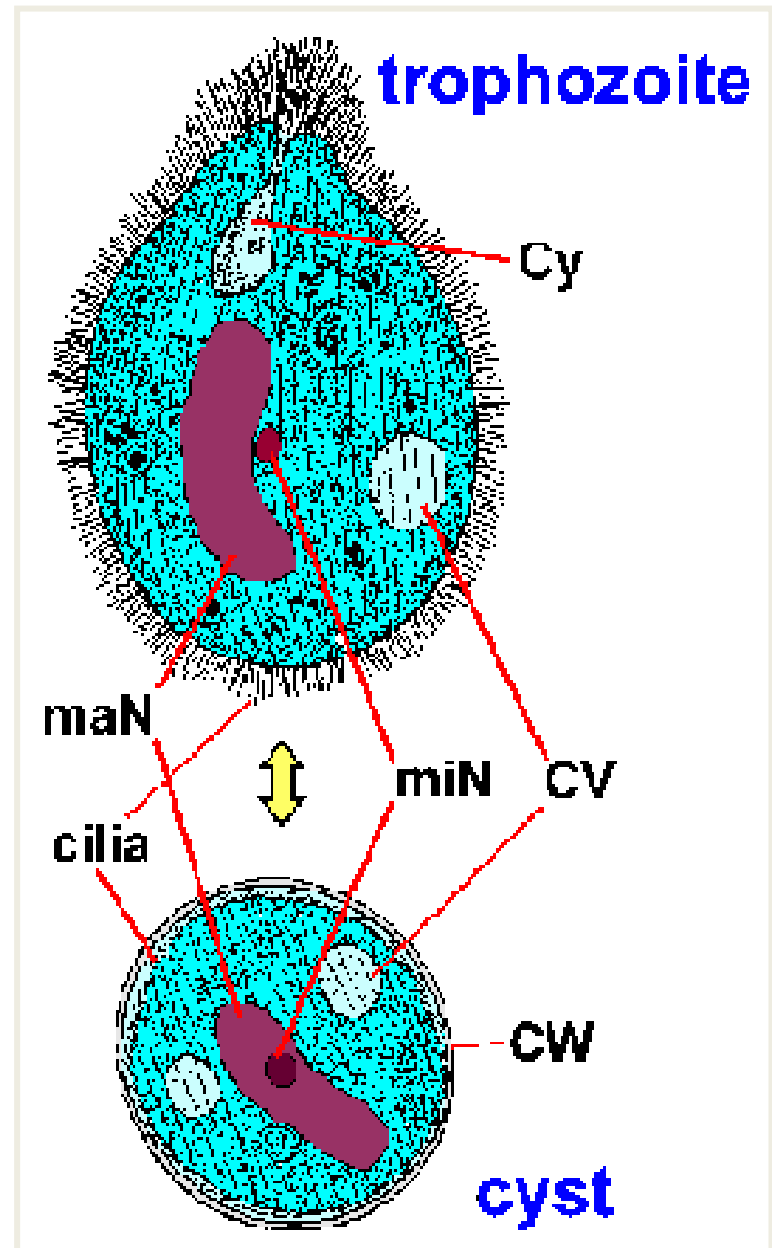


(a) Size of *B. coli* cyst compared with a hookworm egg.



(b) Enlarged *B. coli* cyst.

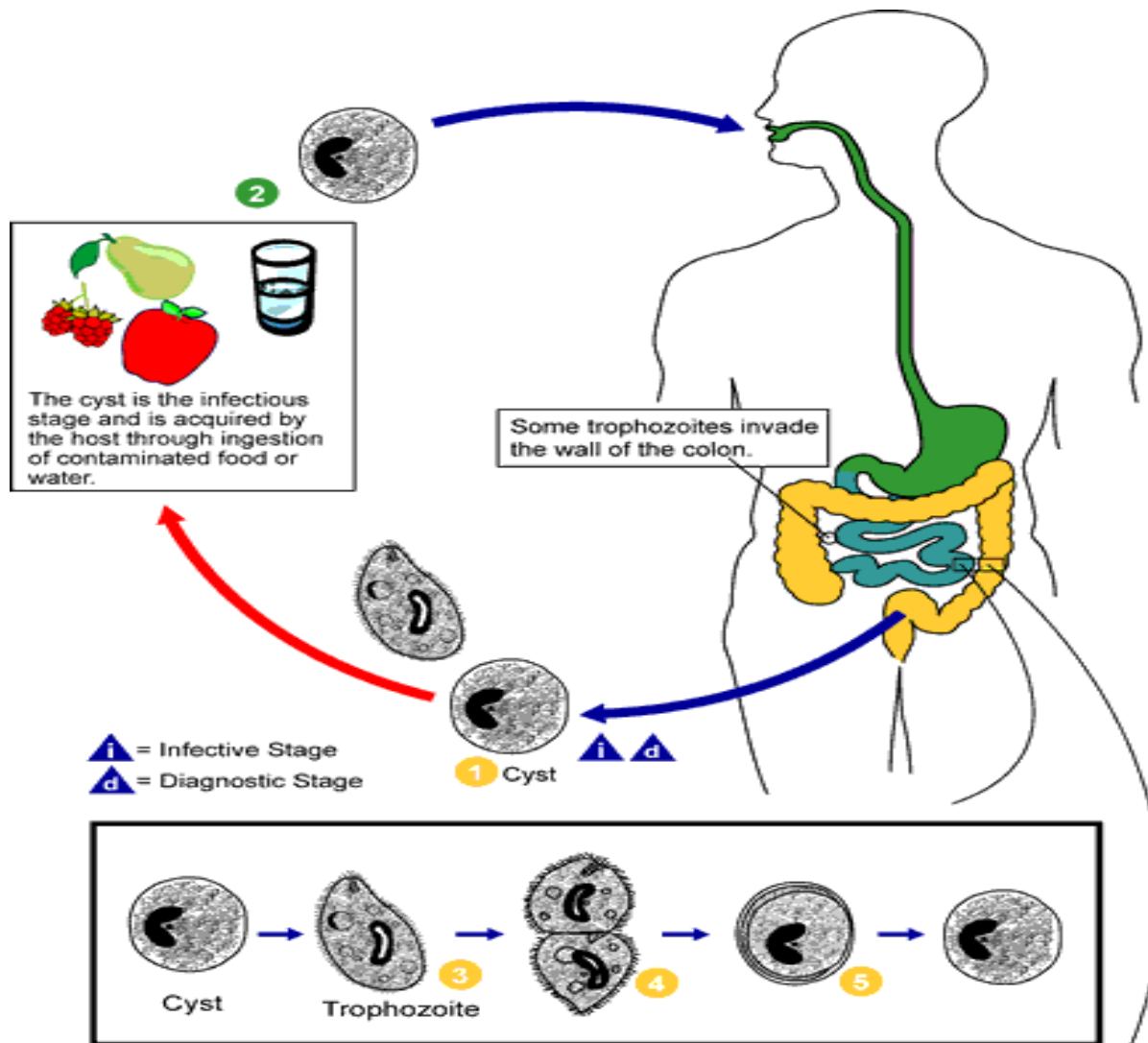
Fig 66 *Balantidium coli* cyst, spherical or oval in shape.



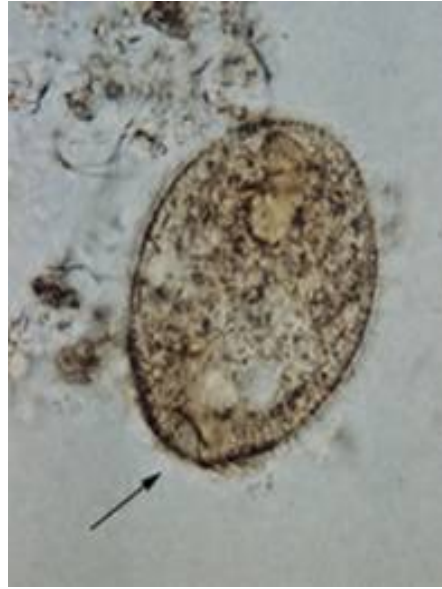
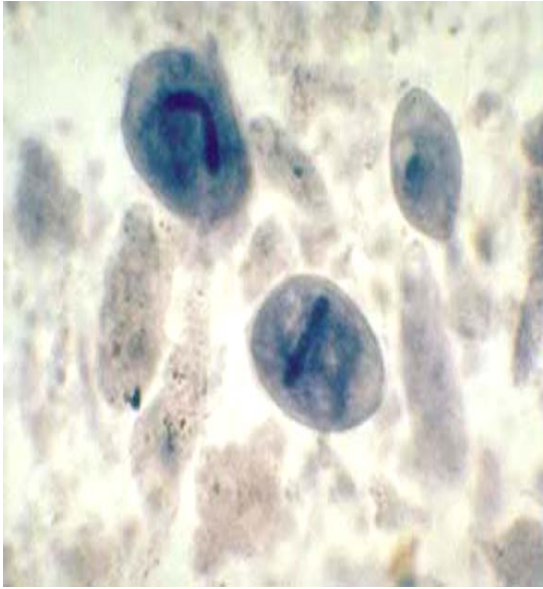
- **Life cycle**

The life cycle of *B. coli* is simple, involving ingestion of infectious cysts, Excystation occur in small intestine and Troph.invasion the mucosal lining of the large intestine, cecum, and terminal ileum.

- *Swine (pigs) and (less commonly) monkeys are the most important reservoirs. Infections are transmitted by the faecal-oral route; outbreaks are associated with contamination of water supplies with pig feces.*
- Person-to-person spread, including through food handlers,
- Risk factors associated with human disease include contact with swine and substandard hygienic conditions.



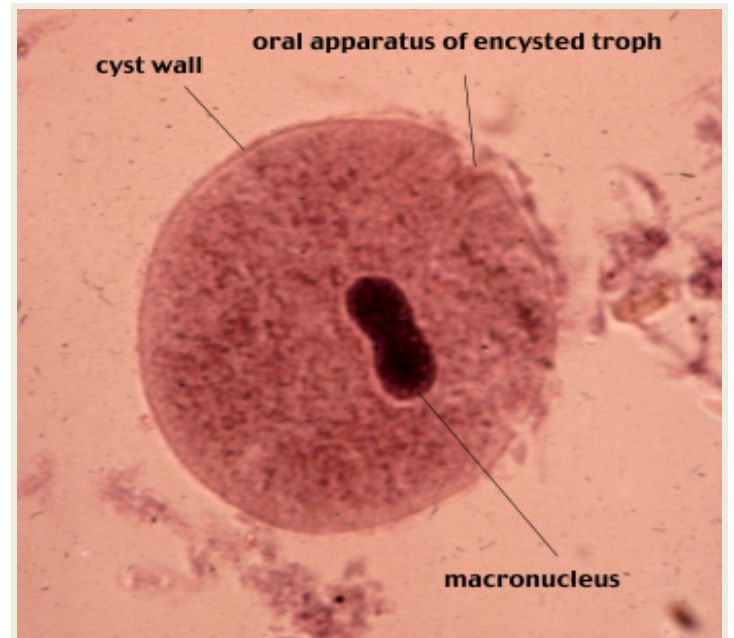
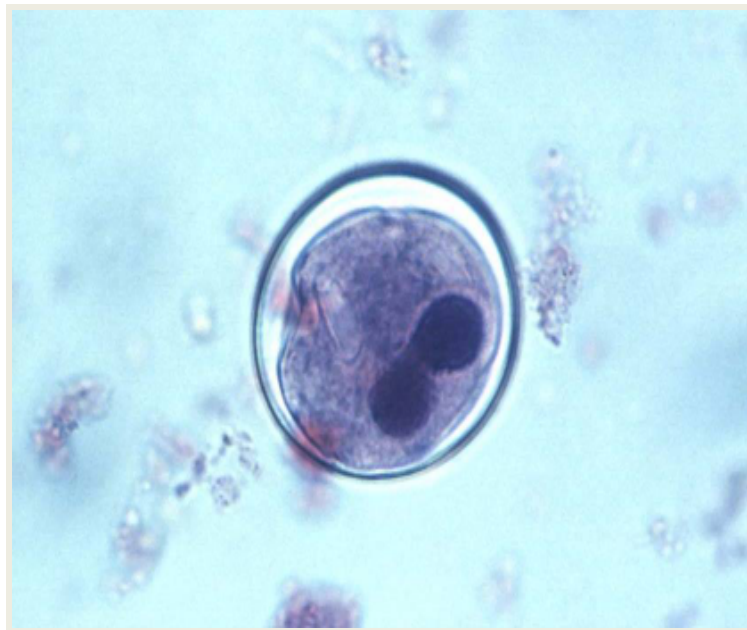
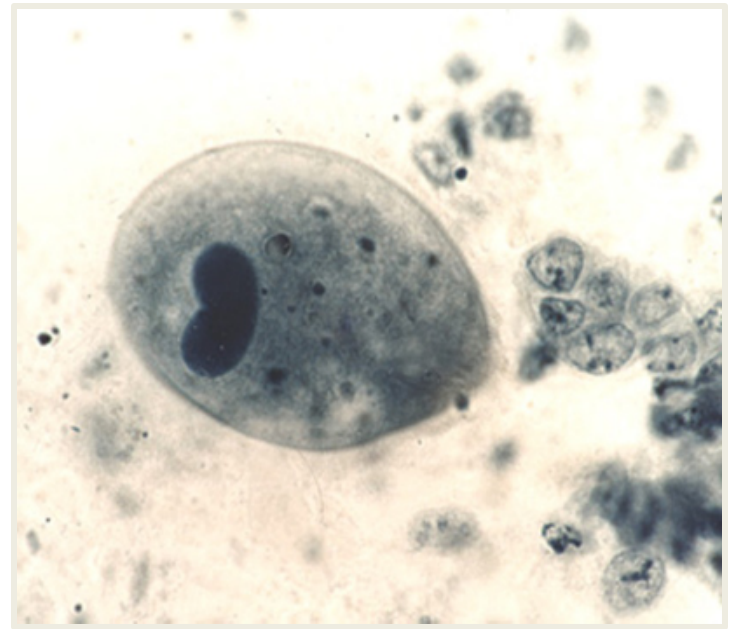
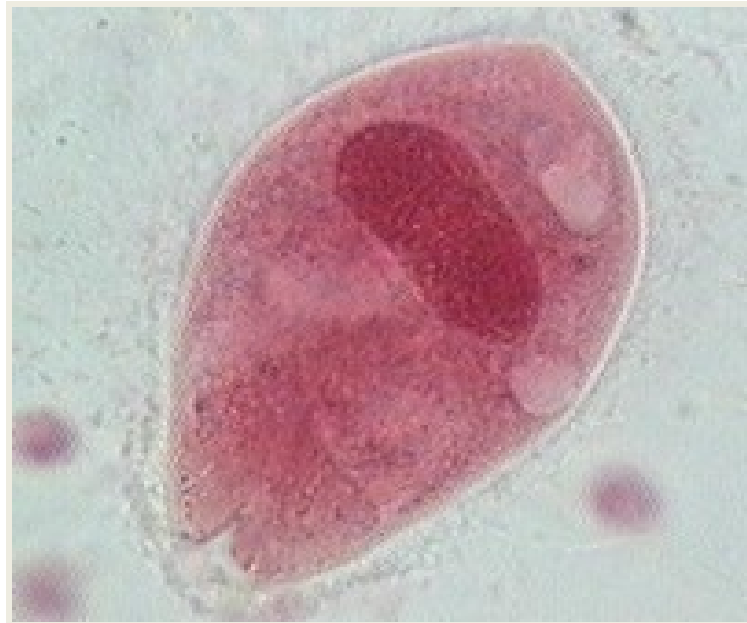
life cycle of *Balantidium coli*



B. coli Trophozoite, stool smear (60 – 200 μm)



B. coli Cyst stool smear (50 – 60 μm)



- **Clinical features**
- As with other protozoan parasites, asymptomatic carriage of *B. coli* can exist.
- Symptomatic disease is characterized by abdominal pain, tenderness, nausea, anorexia, and watery stools with blood and pus. Ulceration of the intestinal mucosa, as with amebiasis, can be seen; a secondary complication caused by bacterial invasion into the intestinal mucosa can occur.
- Extraintestinal invasion of organs is extremely rare in balantidiasis.

