

Entamoeba histolytica - Life cycle

(Part -4)



By Dr. Shashi Prabha
HOD , Zoology Dept.
Karim City College

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Entamoeba histolytica - Life cycle



Lifecycle

- E. histolytica passes its lifecycle only in one host i.e. man
- Quadri-nucleate cyst are the infective forms of the parasite
- The lifecycle of histolytica is simple and consists of infective cyst and invasive trophozoites stage

Entamoeba histolytica - Life cycle



Lifecycle *contd..*

- Humans get infected by *E. histolytica* cyst from contaminated food and water
- The mature cyst is resistant to gastric juice of stomach, hence remains unaffected in the stomach
- When the cyst reaches the caecum or lower part of ileum, the cyst wall is lysed by intestinal trypsin and excystation occurs

Entamoeba histolytica - Life cycle



Lifecycle *contd..*

- The neutral or alkaline environment as well as bile components favor excystation
- Excystation of a cyst gives trophozoites
- Trophozoites are active and carried to large intestine by peristalsis of small intestine

Entamoeba histolytica - Life cycle



Lifecycle *contd..*

- Trophozoites then gain maturity and divide by binary fission
- The daughter organisms formed by binary fission of a single trophozoite grow rapidly and again multiply by binary fission
- The trophozoites adhere to the mucus linings of the intestine by lectin and secrete proteolytic enzymes which cause tissue destruction and necrosis. Parasite when it gains access to blood migrates and causes extra-intestinal diseases

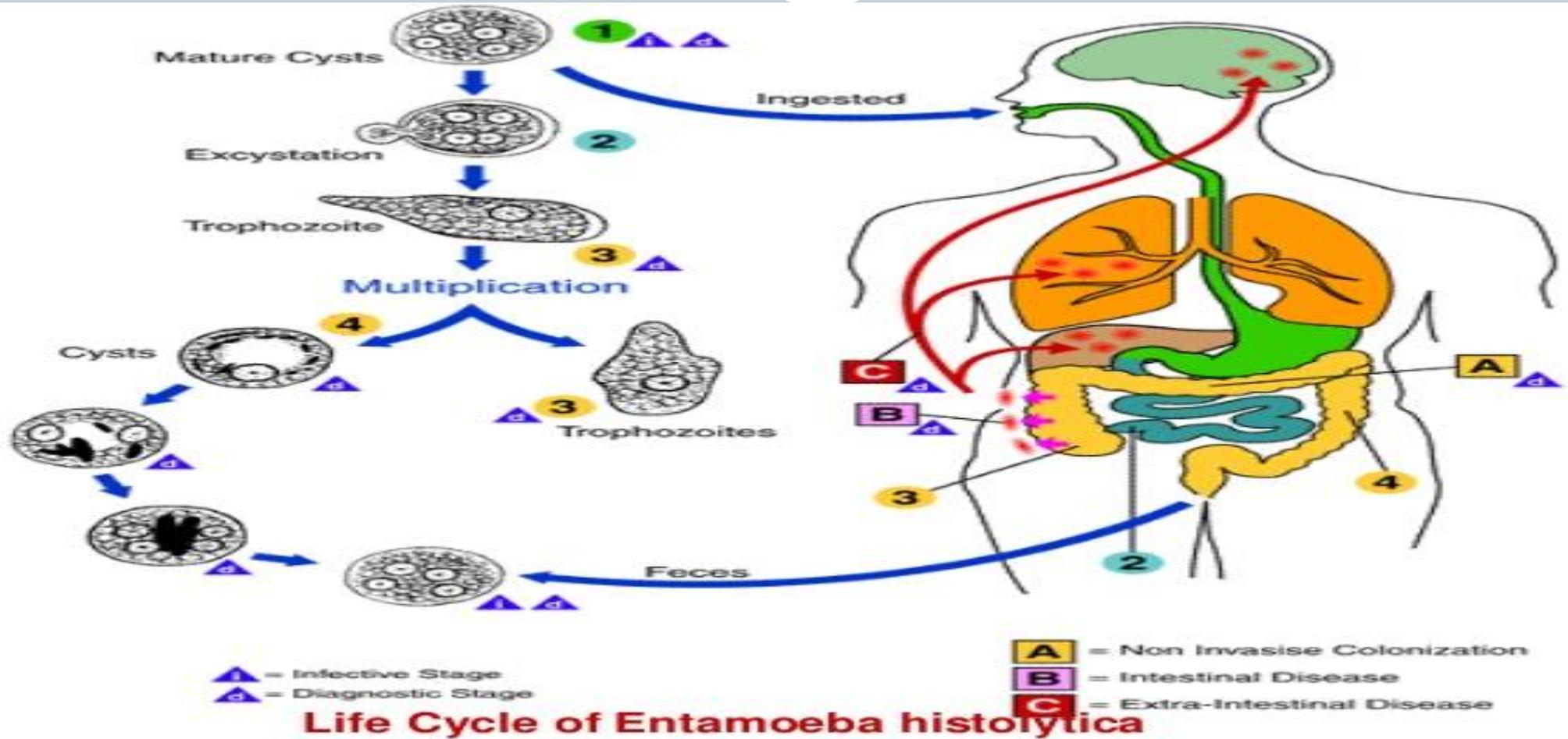
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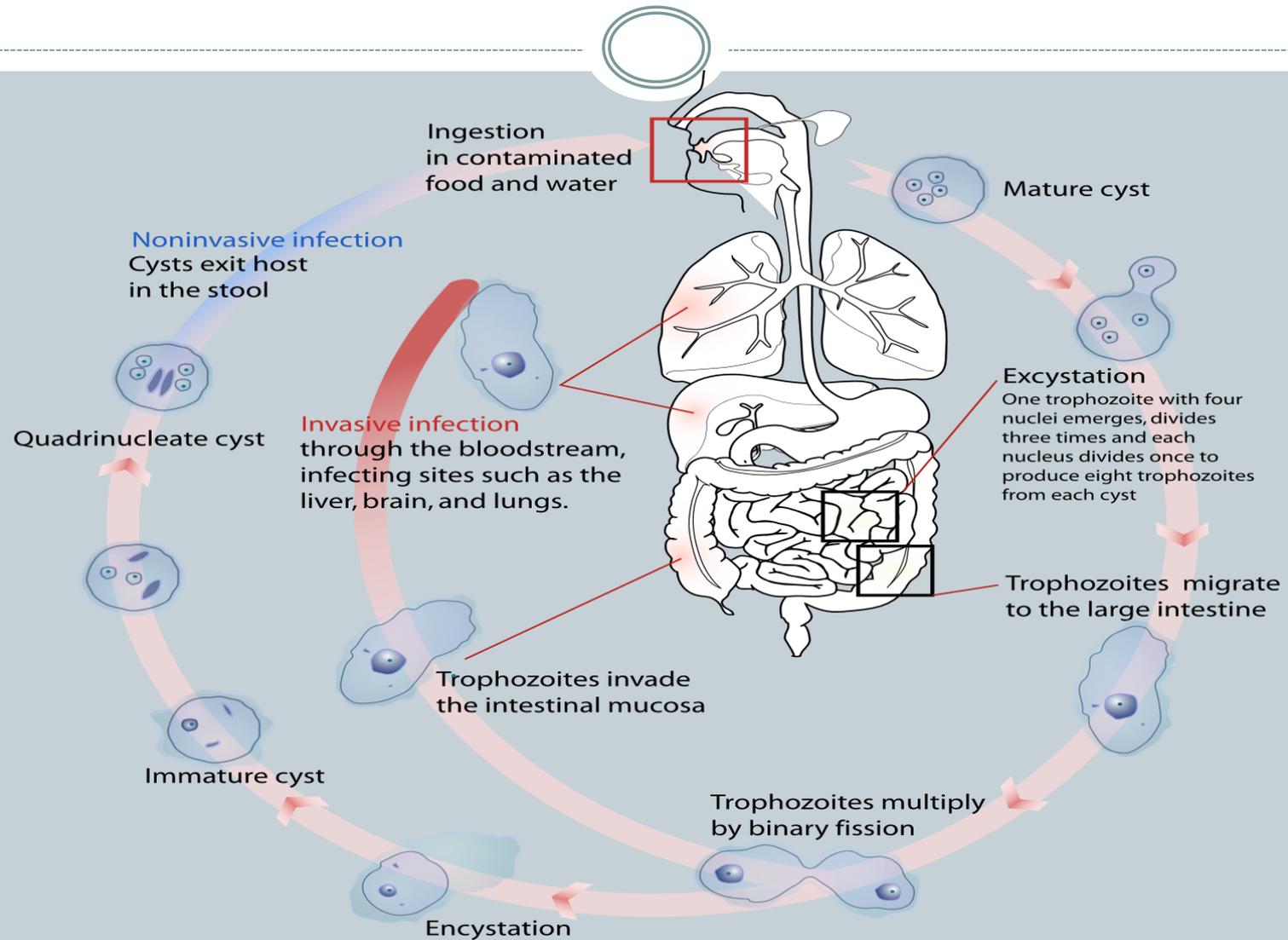
Lifecycle *contd..*

- When the load of trophozoites increases , some of the trophozoites stop multiplying and revert to cyst form by the process of encystation
- These cysts which are first uni-nucleate, turn tetra nucleate after maturation which is the infective stage
- These infective cysts are released with the faecal matter of the host and the cycle continues

Entamoeba histolytica - Life cycle



Flow chart – Life cycle of *Entamoeba histolytica*



Thank You

