ENTAMOEBA HISTOLYTICA

- Entamoeba histolytica is an endoparasile lives in the large intestine of Man. The name histolytica is given because it destroys the tissue.
- It was discovered by Lambell (1859) and Losch (1875). The name Entamoeba was proposed by Cosagrandi and Barbogallow (1895).
- It is all over the world but more in tropical and sub tropical countries such Mexico, China and India etc., where hygiene conditions are poor.
- The mode of infection is contamination through food and water.
- The infective stage is Tetranucleate cyst.
- It has a single, large, blunt pseudopodium (Lobopodium).

STRUCTURE

- Trophozoite measures about 20micron – 30micron in diameter.
- Live in tissues of caecum and colon of large intestine.
- Pathogenic form - cause amoebiasis and hepatic amoebiasis
- Histozoic - secrete histolysin enzyme, dissolve mucosa and sub mucosa of gut wall, walls of blood vessels. Invade RBC and other tissues.
- Occurance of RBC in the food vacuoles is characteristic of trophozoite form.
- trophozoite form is motile and actively feeding stage. On attaining maximum size it reproduces asexually by binary fission and multiplies.
- Its body is covered by plasmalemma. The endoplasm has a single nucleus. The fine filaments of chromatin is arranged in the form of spokes of a cart wheel connecting the central endoplasm with peripheral chromatin granules. So the nucleus appears in the form of cart wheel.
- Important characters to identify trophozoite is food vacuoles loaded with Red Blood Corpuscles.
- Entamoeba lives in an isotonic medium. So contractile vacuoles are absent in it.
- The trophozite of Entamoeba damages the intestinal tissue and causes amoebic dysentry in man.
- Entamoeba multiplies asexually by.binary fission. The nucleus undergoes mitotic division during binary fission.
- Precystic form store glycogen granules, rod shaped chromatoid bodies. Chromatoid bodies are ribonucleoprotein in nature.
- Pre-cystic or Minula form undergo encystation in the lumen of Intestine of man.
- They loose the food vacuoles, pscudopodia become small and round.
- **Encystment:** Precystic stage form a delicate cyst wall around it self. The nucleus undergo two mitotic divisions and form four smaller nuclei. Now the cyst is called tetranucleate cyst. These cysts are discharged along with the faeces of the host.
- **Infection:** It occurs when man ingests vegetables, food stuffs, water contaminated with tetranuclcated cyts.
- **Excystment:** The terranuclate cysts pass along with food, into the small intestine. By the aclion of enzymes the wall of the cyst is ruptured. The tetranucleate form emerge out. This process is called **excystment.** After excystment the parasite is referred as metacystic form. This mclacyst enters into the lumen of large intestine. Here four nuclei undergoes fission resulting into the formation of 8 nuclei.

- E.hislolytica causes Amoebic dysentary or Amoebiasis in Man. It can also cause Amoebic hepatitis.
- Entamoeba histolytica also causes peritonitis and appendicitis.
- In severe infections it may be carried to lungs, kidneys and even to brain
- Invasion of the parasite to tissues other than the intestinal mucosa leads to secondary amoebiasis

- In some cases E.histolystica does not cause ill effects such persons are called carriers or