

Lab 15

Echinococcus granulosus

Common name : Hydatid cyst .

Disease : Echinococcosis / or Hydatidosis .

Habitat : Small intestine of dog and carnivores .

Intermediate host : Human, sheep, swine, and cattle .

Length : 3 – 6 mm with 3 – 4 proglottids .

It was considered the smallest tapeworm in dog intestine .

Mode of infection : Eggs ingestion in contaminated vegetable and food or water .

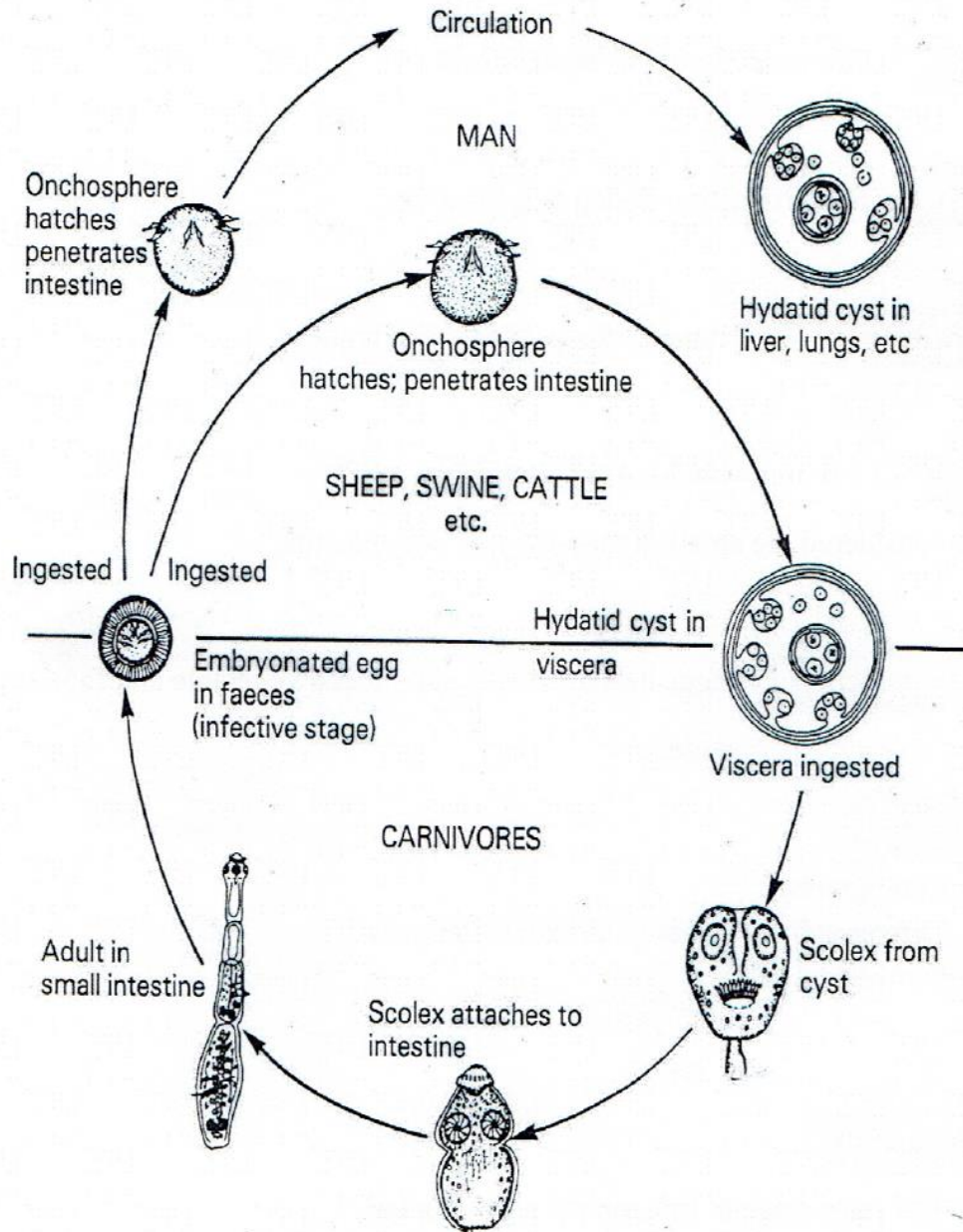
Diagnosis :

1. Radiography .
2. Tomography or ultrasound scan techniques .
3. Serological tests :
 - ELISA .
 - IHAT .

Clinical aspects :

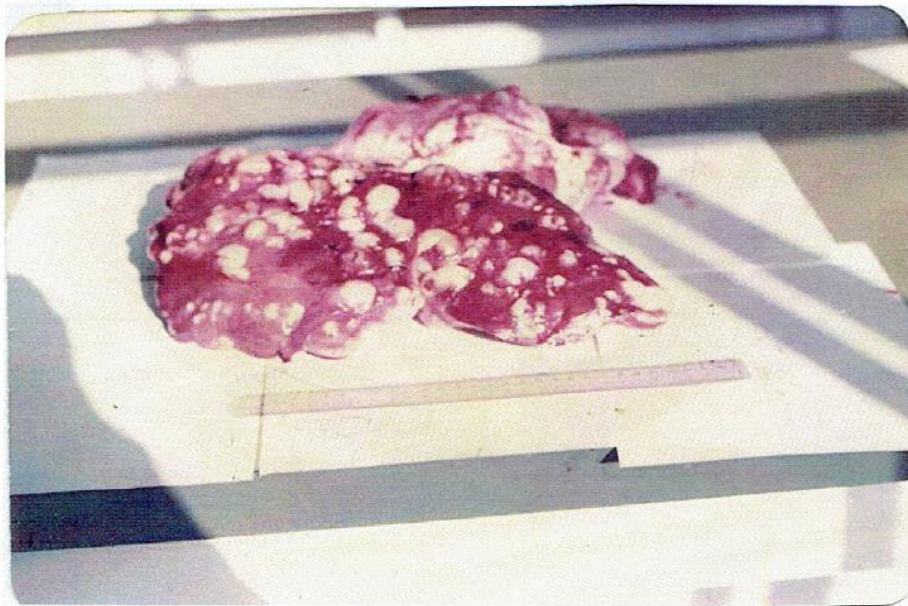
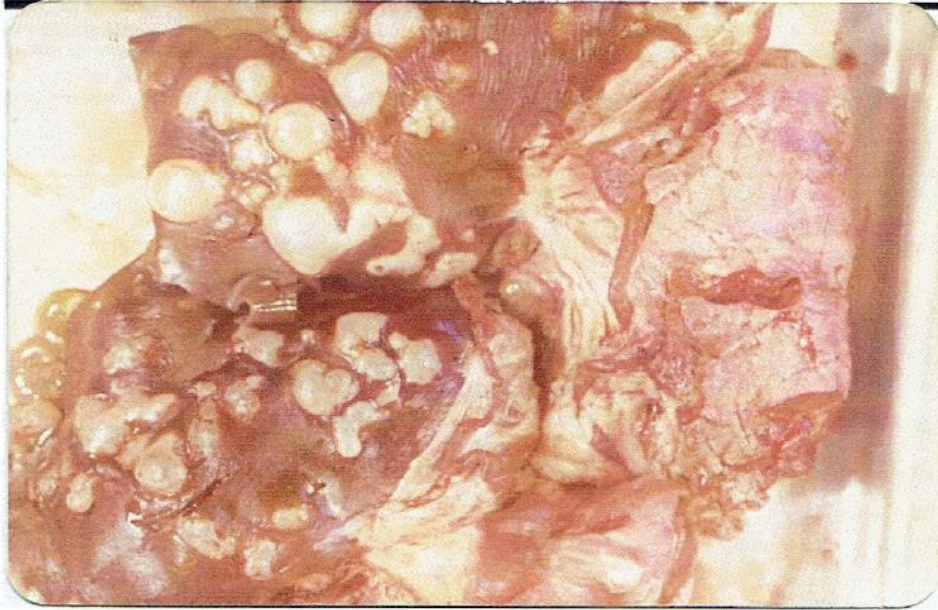
1. The early stage of infection is asymptomatic .
2. The disease depended upon the site and size of the cyst .
3. As the cyst grows in size, symptoms of a space that occupying lesion develops .
4. Allergic reactions and some times anaphylactic shock may occur if the cyst rupture .

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Life cycle of *Echinococcus granulosus*

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Several unilocular hydatids in the lung of a sheep

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* **Internal structure of Hydatid Cyst.** The diagram shows host connective tissue (hct), on the outside of the cyst followed by the laminated layer (ll), formed by the parasite. Inside the ll is the basal layer (bl) on which rests the germinal layer (gl) or the proliferative cell layer (pcl). Brood capsules (bc) are formed by the thickening and protrusion of the pcl towards the cystic cavity to form 'clusters' or 'buds'. These 'buds' grow, become stalked and are vacuolated (1,2,3). A similar budding process leads to the formation of protoscolices inside each brood capsule (Thompson, 1976). The brood capsule may separate from the main cyst if the stalk (st) breaks. In which case, it may swim freely in the cavity or rupture to liberate the protoscolices. The protoscolices generally settle down at the bottom of the cyst and are known as hydatid sand (hs). The brood capsule may also develop a laminated layer when it becomes a daughter cyst (dc).

