

PARASITE : *Echinococcus granulosus*.

One of the smaller Cestodes . The strobila consists of 3-4 Proglottids.

Disease :Hydatid cyst disease.

Definitive host : dog, jackal, wolf, and other canids(adult worm).

Intermediate host :Human, sheep , beef .(hydatid cyst).

PARASITE: *Echinococcus multilocularis*

A small tapeworm, 1.0-3.7 mm. long, of 3-5 segments.

Disease : (Alveolar hydatid disease):

Definitive host: canids and the domestic cat

Intermediate host: Microtine rodents and man.

***Echinococcus granulosus* and *Echinococcus multilocularis* both of them have the same :**

Transmission : by ingesting eggs from contaminated food or vegetable .

Habitat: .(Hydatid cyst) usually occur in liver and lung ; however , any organ may be infected.

Signs and pathogenicity:

asymptomatic disease , but after 20 years or more when the size of cyst become large and pressured on the other organs . Patients have symptoms include epigastric pain , hepatomegaly, weight loss.

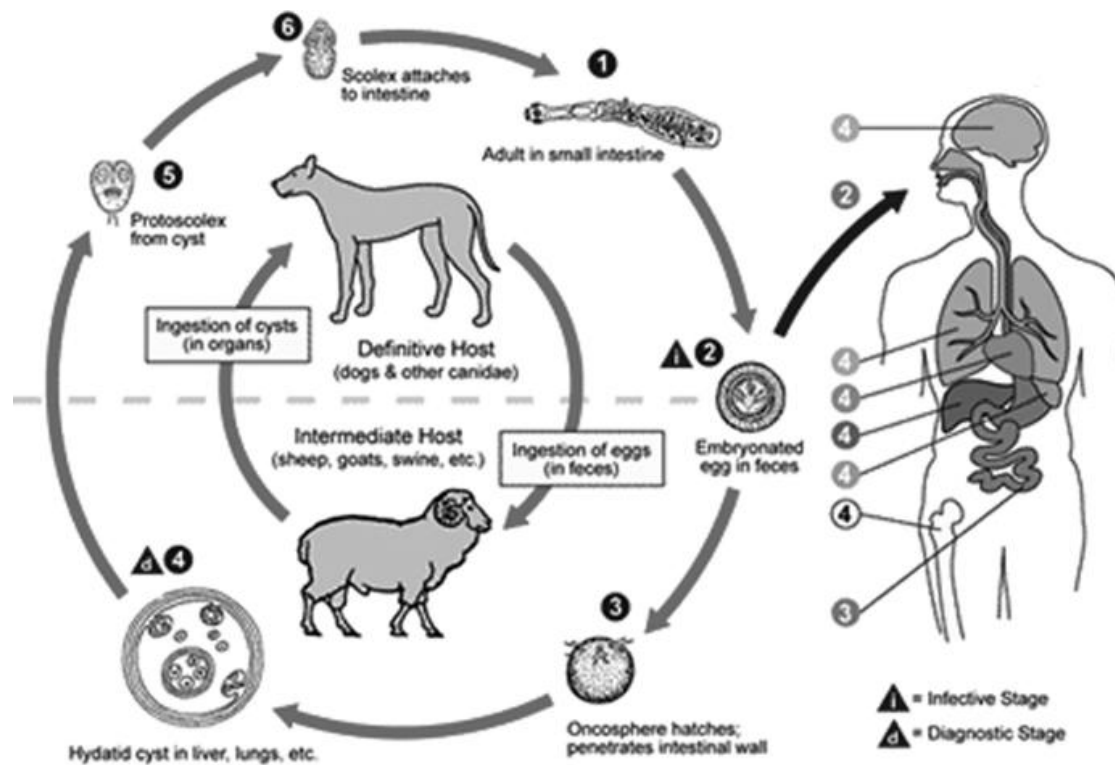
Diagnosis : Ultrasonography, x ray .

Treatment:

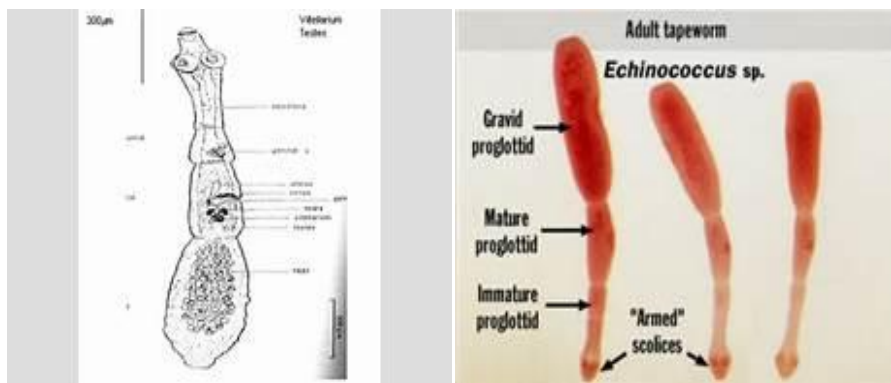
when cyst is small (2-5)cm Can be treated with the albendazole ,But when a cyst more than 5 cm Surgery is the best treatment .

Control: Regular anthelmintic treatment of dogs , All meat must be cooked before feeding , clean vegetable ,don't give infected organ to dog.

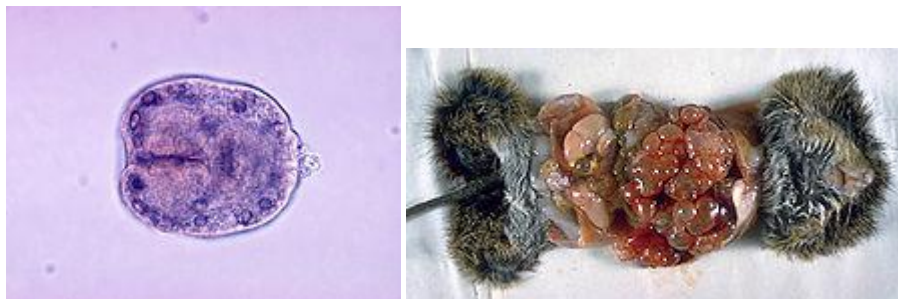
Life cycle:



Echinococcus spp life cycle



E. multilocularis



Scolices of *Echinococcus* *E. multilocularis* hydatid cyst



Hydatid cyst of E. granulosus

PARASITE: *Hymenolepis nana*

It is the smallest cestode (2–5 cm) , that does not need to intermediate host. .When mature, the strobila consists of 150–200 proglottids .

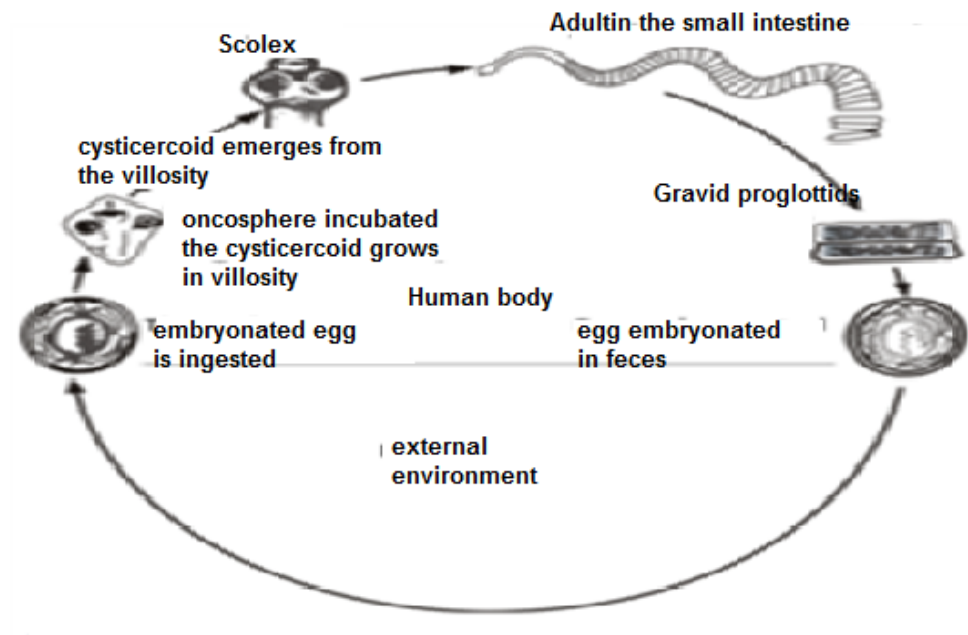
Disease : Hymenolepiasis

Definitive host: Rodents, humans

Transmission : Contaminated water, food or soil

Habitat : Ileum

Life cycle: Autoinfection can also occur in life cycle .



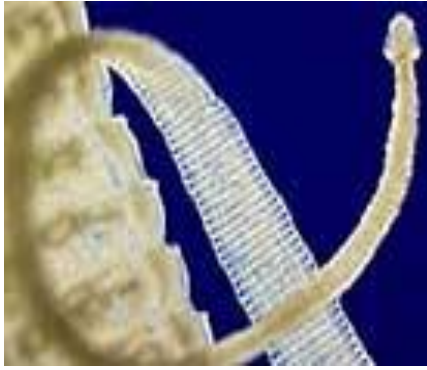
***H. nana* life cycle**

Clinical signs : Infection asymptomatic .The worms eat your food and cause inflammation. People appears weakened , anal itching, diarrhea ,vomiting and stomach ache.

Diagnosis : Direct smear .

Treatment : Praziquantel & Niclosamide .

Control: Wash, all fruits and vegetables , hands with water and soap after using the toilet and before preparing food or eating .



Adult of *H. nana* Scolex of *H. nana*



Egg of *H. nana*