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Paper I

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Taenia Solium (Tape Worm)

The beef tape worm *Taenia saginata* is similar to the pork tape worm *Taenia solium*, in structure and life history. It is the commonest tape worm of man with a much greater incidence than that of *T. solium*. It enjoys a cosmopolitan distribution infecting the beef eating population. Its intermediate hosts are cattle and buffaloes. It is longer than *T. solium*, usually attaining a length upto 12 meters or more. Adult lives in Alimentary canal. Scolex bears four strong, rounded, adhesive suckers but lacks hooks. Strobila comprises upto 2000 proglottids. A gravid proglottid contains about 100,000 eggs. Uterus of gravid proglottid has 15 to 35 branches on either side. Proglottids are usually shed singly with faeces and disintegrated. Scattered eggs on soil, grass, etc, are swallowed by grazing cattle. Eggs hatch in host's intestine freely 6-hooked oncospheres which encyst in muscles forming cysticerci or bladder worms. Man is infected by eating such meaty meat.

LIFE CYCLE

Life cycle involves a single intermediate host. Eggs escape with the faeces of primary host and develop into oncospheres, which infect the secondary host (man and cattle) through his

food or drink or careless association with dogs, sheep, goat, etc. Most harm is done by cysticercus larva. In liver or lung and in a few cases in brain, heart ~~bone~~, kidney, spleen, muscle, etc, the larva develops into a watery bladder or hydatid vesicle or hydatid cyst, having a two-layered cyst wall. The cyst produces by asexual budding, exogenous and endogenous buds containing blood chambers and many internal scolices. A hydatid cyst may grow upto football size in 12 to 20 years in man, necessitating surgery. Dogs acquire infection ~~when~~ they feed upon slaughtered red bodies of infected secondary hosts.

Large hydatid cysts cause inflammation, diarrhoea, abdominal pains, vomiting, eosinophilia etc. Presence of cysts in brain, eye or kidney may prove fatal. Blood capsules and scolices can be killed by injecting formalin solution into the cysts. Removal of adult from the dog's intestine can be affected by Areclin hydromide. Fig:-

Taeniasis

