School of Tomorrow

Addis Ababa

Note 1

4.2 Diseases

Diseases are caused by microorganisms such as bacteria, viruses, fungi, worms and protozoa.

Tapeworm (Cestoda)

Tapeworms have a head or *scolex*. The scolex is armed with **suckers** and **hooks** to attach on the wall of the small intestine. Ones the scolex has become fixed on to the wall of small intestine, **segments** continue to grow from it. Each segment contains male and female sexual glands which at maturity produced the male and female gametes respectively. The male gametes fertilize the ova in order segments. Sometimes the terminal segments break off and can be seen in the faeces like short pieces of white tape, from which the worms get their name.

Tapeworms live in the intestines of their hosts. They do not feed off their host, but rather rob them of their digested food. Tapeworms do not have a digestive system so they have to absorb nutrients directly across their skin. They have a life cycle, which involves at least two different hosts. Two of the most common tapeworms that infect people are **beef tapeworm** and the pork tapeworm. Tapeworms are found in animals such as fish, cows, pigs, sheep, dogs and cats.

In regions with poor sanitation tapeworm eggs are commonly ingested by humans instead of animals like pigs. In such cases cysticerci can still develop. These may form large cysts, which can be life- threatening. Tapeworm cyst may grow to a reasonable size and, because they are found deep in the tissue, they may start taking up valuable space. If the cyst settles in the brain, eye or liver, normal function of these organs may be severely restricted.

Symptoms

Tapeworms may cause deficiencies of vitamins such as B12 (example, anemia and feelings of weakness), weight loss and seizures if the cysts settle in the muscles and organs such as the liver and the brain.

Control and prevention

We can prevent tapeworms by using proper disposal or removal of faeces in pits or latrines not in open fields where cattle graze and meat should be well cooked sufficient to kill the cysts.

Class work #1

I. **Write true or false**

1. Diseases are caused by MOs such as bacteria, viruses, fungi, and protozoa.

2. The head part of tapeworm is called scolex.

3. Tapeworm is a round worm that parasites the wall of intestine of humans.

4. The most common type of tapeworm in Ethiopia is Taenia saginata.

5. The symptoms of tapeworm are weight loss, feeling of weakness and segments of tapeworm in the faeces.

6. Proglotti has male and female organs.

7. Tanea saginata uses pig as intermediate host.

8. Onchospheres are structures that are released from the segment and penetrate through the walls of large intestine of the cattle.

9. Pernucious anaemia is caused due to the lake of vitamin B12.

10. Tapeworm can be control by using anti-worm, proper dusposal faeces, efficient inspection of meat.