

ances, permit me a few remarks on the history of tapeworms, or cestodes, for the benefit of those who might not be fully acquainted with the subject.

In this group alternation of generation is strictly maintained throughout, *i.e.*, the cysticercus form generates the tapeworm, and *vice versa*.

The tapeworm consists of a head and neck, to which are attached several segments. Each segment, except those near the head, are sexually complete. These mature segments become detached and discharged from the alimentary canal. They are then broken up and the ova are set free. These ova may be taken into the stomach by infected water, herbs, or other means. (Osler states that in violent vomiting of a person affected with tapeworm segments may be forced into the stomach, and thus the individual becomes infected with the cysticercus.) The protective coating of ovum is digested in the stomach, setting free the little embryo, which may here pass into the blood and circulation. It then lodges in subcutaneous tissue, intermuscular septum, membranes of brain, or elsewhere. In its growth it becomes vacuolated, and an imperfect water vascular system develops.

The embryo, as it develops in its new situation, becomes thickened at one point, where invagination takes place, this process going on until complete invagination is accomplished. Thus, it forms a double-walled sac, open at the point of invagination; externally the outer wall or capsule, internally the inner wall, derived from the invaginated portion, and within this the scolex. Looking into the sac, within inner wall, from opening at point of invagination, you first perceive the hooklets (if these be present in the parent tænia), then elevations or suckers, usually four, showing this to be the head of the cysticercus. This constitutes the cystic form.

Secondly, when these cysts are taken into the stomach of man by means of mealy pork infected with the cysticercus described above, the cyst wall is digested away, and thus allows the head to become evaginated, or protruded. Passing into the intestine, the hooklets with which it is armed fasten on to the intestinal wall and attaches the head to it. It is then nourished through the suckers and produces the segments, when it matures into a perfect tænia solium.

To return to case in point. Gross and microscopical appearances:

Cysts: There were four of these, rather uniform in size, and, as stated previously, about as large as a hazel nut, either circular or oval, and semi-translucent in appearance. Upon section, these proved to be cystic.

The capsule was firm and tense; attached to this was a little body, extending into the cystic cavity, turned on itself at right angles, irregular in outline, about one-quarter of an inch in length, and of a grayish color.