

in the recto-uterine cul-de-sac which he tapped and drew off the contents. A sharp attack of peritonitis followed which seemed to result in the death of a number of other colonies, some of which at least found their way in a mysterious fashion through the walls of the bladder and were extended by the urethra.* A large jarful of cysts were so passed, more than could be held by the bladder. Rupture has occurred into other passages leading to the exterior as into the bronchi, uterus or vagina and the cysts passed out through these paths. If unfortunately the rupture should occur into the peritoneal cavity the probable result would be intense pain, collapse and death.* Tait, however, ascribes the presence of hydatids in the peritoneal cavity to rupture of a sac in the liver from which the foreign organisms are set free to attach themselves to some part of the serous lining. I think that the perforation of the intestinal wall by the embryo or proscelix a more likely way of starting tumors in this situation. A parasite that can make its way to any part of the organism, would find little difficulty in reaching the peritoneum after it has once entered the stomach or bowels.

The diagnosis of hydatids is often impossible until operative interference clears the way. "A fluctuating, painless swelling, slowly increasing in size, but giving rise to no inconvenience except by reason of its bulk," would describe any growth. In reference to the hydated fremitus which is said to be pathognomonic to those possessing the *tactus eruditus*, Tait says that "our great English authority on this disease, Sir W. Jenner, has only noticed this sign once in his large experience." The sensation can only be learned by experience, but is supposed to be due to the striking of the daughter cysts against one another. A chemical examination of the fluid would help to distinguish it from ovarian or parovarian cysts, while the microscope will generally show echinococcus hooklets in the fluid that is withdrawn from the tumor. Many small hydatids have been found post mortem which were not known to exist during life. They were not large enough to produce symptoms. Some-

times a spontaneous cure has been effected by the connecting tissue sac becoming thickened to such an extent as to destroy the enclosed cyst by pressure and obliteration of the blood vessels supplying the sac. In other cases the cause of death to the parasite appears to be the crushing of the daughter vesicles from too many of them being formed in too limited a space.

The modes of treating these cysts are four in number, viz., electrolysis, puncture and drainage, incision and enucleation. Dr. Julius Althaus suggested the plan of introducing into the tumor two electrolytic needles, one or two inches apart, both connected to the negative pole of a ten-cell battery, and thus completing the circuit by placing on the abdomen a moistened sponge attached to the positive pole. The application should be continued for at least ten minutes, and may require to be separated at longer or shorter intervals. Dr. Hilton Fogge and Mr. Durham, of Guy's Hospital, both report cases treated successfully in this way.

The commonest mode of dealing with these cysts is by puncture and drainage. The operation is similar to aspiration of fluid accumulated in the body from any other cause. When the contents are withdrawn the cyst proper collapses, the walls falling in folds from the adventitia with a peculiar tremulous motion. Usually the surrounding sac cannot at once contract to the same extent as the contained cyst and the empty space between the collapsed cyst and the connective tissue wall becomes filled with a serous exudation. This is reabsorbed as the sac slowly contracts. The collapsed cyst may or may not undergo degeneration. Mr. T. N. Fitzgerald reports having found, during autopsies on persons who had been tapped many years before, cysts almost unchanged lying simply folded up inside the cavity of the adventitia. If strict antiseptic precautions are used in doing this operation it is almost free from danger. Several cases in the Winnipeg General Hospital have been tapped repeatedly without any but the most favorable outcome. Some times, however, undesirable results may follow this practice; as in using the trocar elsewhere we may strike parts