

## PELVIC HYDATIDOSIS

### (A Case Report)

by

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Hydatidosis is a very rare disease in our country. Even in countries where its incidence is high pelvic hydatidosis is a rare condition. In 1934 Ruiz published statistics of hydatidosis covering the period 1892-1934. Out of a total of 165 cases published, 101 cases were of the female pelvis and genital organs and the rest of abdomino-pelvic origin. Since 1934, new cases have been published from time to time in foreign literature. In India, only two cases of pelvic hydatidosis have been reported so far.

A brief review of the anatomico-pathological evolution of the disease will not be out of place here. It is caused by *taenia echinococcus* which inhabits the small bowel of the dog. The dog becomes infected by ingestion of the fertile hydatid cyst in the viscera of animals, usually sheep, suffering from the disease. The ova are passed in the faeces of the dog as fully developed embryo or boring embryo. These are ingested through water or food by the intermediate host which is usually the sheep and occasionally the man. The ova are hatched in the stomach or upper small intestine and are carried to the liver through the portal system.

Majority of them are arrested here and a few of them pass through the portal filter and drain into the vena cava and thence to the lungs through the heart. Some of these may pass through the pulmonary capillaries and enter the systemic circulation to be lodged anywhere they are arrested in the body. If the final destination is suitable the embryo commences to form a hydatid cyst.

Most authors are agreed that pelvic hydatidosis is secondary to the visceroperitoneal condition. The primary cyst occurs in the liver where it is most common or the spleen or the omentum. The cyst bursts discharging vesicles which fall into the pouch of Douglas and get lodged and encysted on the anterior wall of the pouch of Douglas. This is what Deve calls heterotopic primary echinococcosis of the peritoneum.

Some authors believe in primary pelvic hydatidosis though it is quite rare. This occurs by way of blood stream, the embryo penetrating through the wall of the first portion of the duodenum into a capillary and thence into the vena cava avoiding the liver on the way. They can then reach any part of the body through the heart, if the capillary lumen allows them. As for primary infection through the rectum or vaginal

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walls it is only a theory which is not accepted by most of the authors.

An hydatid cyst is composed of an ectocyst and an endocyst. The endocyst is lined by germinal epithelium and contains hydatid fluid. The ectocyst consists of fibrous tissue formed on account of inflammatory reaction caused by the presence of foreign body in the tissues. Budding of the germinal epithelium inside the cyst gives rise to the brood capsules. The scolices are formed in the brood capsules. Occasionally a cyst loses the power of reproduction.

The formation of daughter and grand-daughter cysts is another form of development which occurs frequently in man and occasionally in other animals. It has been established by Dew and Deve that this abnormal development is not due to a separate variety of the parasite but is due to some interference in the normal evolution of the parasite. Trauma in some form or other, may be a direct blow, or from muscular movement, or chemical irritation by the presence of blood or bile or urine causes detachment of islets of germinal epithelium from the wall of the cyst. The germinal epithelium then lays down layers of hyaline membrane and produces fluid, thus forming small daughter cysts.

#### *Complications which may arise from Presence of Cyst*

Rupture of the cyst into serous cavities is a common complication and further complications arise as a result of this. Intraperitoneal rupture of the cyst may occur spontaneously or as a result of trauma. Occasionally, a cyst may be extruded in-

tact. Owing to gravity, it will tend to settle down in the pelvis unless it is held up by the omentum or in a fossa. As a rule, these cysts become coated with fibrin and gradually acquire a serous covering and appear like a primary cyst in the pelvis. But the original site of the cyst is always indicated by a scar in the liver.

If the cyst bursts into the peritoneal cavity brood capsules, scolices and daughter cysts are liberated. These make their way into the pelvis and get implanted on the pelvic peritoneum resulting in the production of extra-peritoneal cyst. Characteristic feature of secondary echinococcosis is that the cysts are multiple.

If the patient had previously become sensitised, absorption of the hydatid fluid from the peritoneum may result in anaphylactic shock. As a result of damage caused to the liver substance due to rupture of the cyst, bile may get accumulated in the peritoneal cavity.

#### *Diagnosis*

Pelvis hydatid cysts are almost always diagnosed on laparotomy, for the clinical signs are similar to those of the tumours of the uterus and its adnexae. The symptoms associated with pelvic hydatidosis do not have any characteristic feature and vary according to their position in the pelvis. Cyst in the pouch of Douglas and uterovesical pouch produce pressure symptoms, i.e. rectal and vesical symptoms due to pressure. Cases of labour obstructed by the cyst in the pelvis have been reported (Devi and Taub). The uterine cyst gives rise to menstrual irregularities and disturbances of micturition. Cysts

of the adnexae give rise to the symptoms caused by any other adnexal swelling.

Thus it will be seen that a pre-operative diagnosis of pelvic hydatidosis can be made only from a previous history of the disease or the presence of a cyst elsewhere, such as the cyst of the liver. The investigations showing a marked eosinophilia, a positive complement fixation test, a positive Casoni intradermal reaction, the presence of pulmonary cyst and calcification in the wall of the old cysts in other situations help in confirming the diagnosis.

**Case Report**

K, aged 35 years, was admitted into the Zenana Hospital, Jaipur, on 8-5-58 with a provisional diagnosis of ovarian tumour and the following complaints:—

1. Scanty periods of two to three years' duration.
2. A painful swelling in the lower abdomen of fifteen days' duration.
3. Burning micturition and constipation of fifteen days' duration.

Till two to three years before admission, her menstruation was normal in rhythm and flow and was associated with pain during the flow. Since two to three years, the cycle had been regular but the flow had become scanty and was associated with pain as before. Her last menstruation was fifteen days before admission. She had five full-term natural deliveries the last of which was in 1948. One child was lost in infancy. There was no history of abortions.

Fifteen days before admission into the hospital, the patient developed pain in her lower abdomen and burning micturition and at the same time she noticed a swelling in the lower abdomen. There was no fever. The pain was almost constant and was not associated with vomiting. Her bowel movement was not as free as before. All these symptoms continued to persist and therefore she sought medical aid at this hospital.

On examination, there was nothing abnormal detected in her heart and lungs. Her blood pressure was 140/90 mm. of mercury, her haemoglobin, 10 gm.% and her urine, normal.

Abdominal examination revealed a firm swelling arising from the pelvis and filling up the lower abdomen almost up to the umbilicus. On the right side of the tumour a small nodule of the size of an ovary was felt. It was felt to be the right ovary drawn up by the tumour. Side to side mobility of the tumour was slightly restricted. There was no tenderness. The tumour was dull on percussion in the middle and resonant on the sides. Liver and spleen were not palpable.

Bimanual vaginal examination revealed the cervix to be slightly at a lower level than normal and the body of the uterus to be incorporated with a firm mass felt in the pelvis and extending into the lower abdomen up to the level of the umbilicus. The mass was slightly mobile from side to side and not tender. Speculum examination of the vagina revealed a healthy cervix and vagina. A provisional diagnosis of multiple fibroids of the uterus was made. Abdominal total hysterectomy was decided upon.

The abdomen was opened by a median subumbilical incision. The peritoneum all along the line of skin incision was so firmly adherent to the underlying structures that the peritoneal cavity could not be opened into. Hence the skin incision was extended upwards beyond the umbilicus. The peritoneum above the level of the tumour could then be incised. An irregular cystic tumour filling up the lower abdomen and adherent to the surrounding structures all around came into view. While the adhesions were being separated by blunt and sharp dissection, the tumour was opened into in three places. Greenish purulent fluid with a number of daughter cysts escaped. Both ovaries were healthy. Both tubes were inflamed, thickened and had fallen back. The uterus was not visible at this stage. The tumour was found to be adherent to the front of the whole of the uterus. It could be freed from the tumour by blunt dissection. The tumour was also adherent, firmly to the bladder all along its superior surface. While attempting to free the bladder by

finger dissection it was perforated in two places. So further separation was not attempted and that part of the cyst wall was left behind. A part of the posterior cyst wall was also left behind on account of dense adhesions. The cyst was then removed and the cyst wall which was left behind was touched with 2% formalin. Bladder injury was repaired. Total hysterectomy could not be performed since the bladder was adherent to the cervix. Hence subtotal hysterectomy with right salpingo-oophorectomy and left salpingectomy was done. The raw area could be peritonised with difficulty. The abdomen was closed in layers.

Histological examination of the tumour confirmed the diagnosis. Post-operative period was uneventful. The patient has not yet reported after discharge.

### Comments

This case illustrates how a pelvic hydatid cyst is usually diagnosed as uterine or adnexal tumour. The history of fifteen days' duration of growth is obviously wrong. It only means that it was fifteen days since the patient's attention was drawn to it.

The usual investigations for confirmation of diagnosis were not done as the condition was not in the least suspected. After the operation the patient denied any contact with dogs. Casoni's test could have been per-

formed during post-operative period, but it was not done for want of the reagent. Skiagram of the chest and the liver region was not done, as it was then felt not necessary since there was no clinical finding pointing to the disease process in the lungs and liver. However, it should have been done to make the investigations complete.

I am thankful to Dr. R. M. Kasliwal, Principal, S.M.S. Medical College, for having allowed me to report the case.

*Note.* Recently there was a case of pelvic hydatid cyst complicating labour treated in this hospital.

### References

1. Briant Evans: Jour. of Obst. & Gyn. Brit. Emp.; Vol. 47, 191-197, Feb. 1, 1940.
2. Celener D. and Orlandi M. A. R.: Prensa Medical Argentina; 34, 1288-92, July 11, 1947.
3. Devi P. K.: Jour. of Obst. & Gyn. of India; VI, 203, 1955.
4. Molina A. C.: Rev. Med. De Rosaria; 28, 847-56, 1938.
5. Taub M.: Jour. of Obst. & Gyn. of Brit. Emp., LXVII, 114, Feb. 1, 1960.