

## **An Unusual Presentation of Hydatid Cyst (*Echinococcus granulosus*)**

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**A case of 24-year-old Saudi lady who presented with primary infertility due to multiple organ infestation with hydatid cyst is presented. The cysts were found in the mediastinum, right lung, both right and left lobes of the liver, pouch of Douglas and also scattered within the abdominal cavity.**

***Bahrain Med Bull 2001;23(1):49-51.***

Hydatid disease (*Echinococcus granuloma*) is endemic in the middle east and other parts of the world, including India, Africa, South America, New Zeland, Australia, Turkey and South Europe<sup>1-3</sup>. Infestation by hydatid disease in humans most commonly occurs in the liver (55-70%) followed by the lung (18-35%)<sup>4</sup>. Even though hydatid cysts can occur in any organ, it is rare to see the disease involving so many organs at the same time as was in this case. This paper reports a case of unusual presentation of hydatid cyst probably following improper excision of the initial liver hydatid cyst, or a recurrence or both.

### **THE CASE**

A 24-year-old Saudi female presented with a 3-months history of progressive lower abdominal pain, dysmenorrhea, irregular menses and infertility. Her main complaint was primary infertility. She also gave a history of chest pain with dyspnea. Her past medical history revealed that about 9 years prior to this admission she had hydatid cystectomy performed from the right lobe of the liver which was adherent to the right dome of the diaphragm. There were also two pelvic hydatid cysts which were removed at that time. Examination during this present admission showed a palpable liver 3 cm below the costal margin. There was a supra pubic palpable nontender cystic mass of about 16 weeks gestation. Her laboratory investigations were essentially normal, but the IHA titer was 1:8192.

CT scan chest and abdomen showed multiple lobulated cystic lesions in mediastinum, right and left lobes of the liver, right paracolic gutter and Douglas pouch (See figs. 1-5).

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*Figure 1. CT-scan showing hydatid cyst in the mediastinum*

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*Figure 2. CT-scan showing hydatid cyst in the abdominal cavity*

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*Figure 3. CT-scan showing hydatid cyst in the abdominal cavity*

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*Figure 4. CT-scan showing hydatid cyst involving the liver*

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*Figure 5. CT-scan showing hydatid cyst in the abdominal cavity*

**TREATMENT**

**Results of Treatment**

Laparotomy and thoracotomy were performed together under general anaesthesia. Multiple hydatid cysts were found in both ovaries, mesentery, right para-colic gutter, diaphragm and right lobe of the liver. They were removed after injecting 5% silver nitrate solution.

Right thoracotomy through the bed of 5<sup>th</sup> intercostal space, showed cysts in the right lung, pericardium and superior mediastinum. These were also removed.

Post-operative course was uneventful and she was discharged in satisfactory condition a week after surgery on Albendazole and Praziquantel.

## DISCUSSION

Hydatid disease due to *Echinococcus granulosus* is endemic in cattle and sheep-raising regions of the world. The cyst occurs mainly in the liver and lungs. Abu Eshy<sup>5</sup> reported a series of cases which showed that it can also affect the brain, heart, kidney and ureter, spleen, uterus, fallopian tube, mesentery, pancreas, diaphragm and muscles.

Clinical presentation of this disease depends on the size and the site of the cyst in the body. In many instances the infestation is not usually limited to one organ but may spread to involve contiguous organ<sup>5,6</sup>. The typical CT scan appearance tends to confirm the diagnosis<sup>7</sup>.

This patient was diagnosed correctly by CT scan and this seems to be the experience of some workers too<sup>8</sup>. Further more, echocardiography and magnetic resonance (MRI) are of great value in diagnosing and determining the anatomic extent and relationship of the cyst in cardiac and extrahepatic hydatidosis<sup>9,10</sup>. Some serological tests can be done for diagnosis, screening and post-operative follow up for recurrence. These include indirect haemagglutination (IHA) test, enzyme-linked immunosorbent assay (ELISA) and latex agglutination test<sup>11</sup>.

The treatment of hydatid cyst is surgical excision or drainage<sup>12</sup>. The decision whether to excise or drain the cyst depends on its location. In the liver drainage is advised but when it is relatively isolated, it can usually be excised. However, pre and post operative 1-month courses of Albendazole and 2-weeks of praziquantel should be considered in order to sterilize the cyst, decrease the chance of anaphylaxis, decrease the tension in the cyst wall and to reduce the recurrence rate post-operatively<sup>3,12</sup>. Also, intraoperative use of scoliodical solution before opening the cavities tends to kill the daughter cysts and therefore prevents further spread<sup>9</sup>.

The recurrence encountered in this case is most likely due to dissemination from previous surgery. Other methods of treatment that had been advocated for hydatid cysts include the use of Albendazole<sup>8</sup>, Praziquantel<sup>13</sup>, combination of Albendazole and Praziquantel<sup>14</sup> and percutaneous aspiration and drainage<sup>15,16</sup>. The recurrence rate of this disease is still relatively high, accounting for about 10%<sup>15</sup>.

## CONCLUSION

**We conclude that *Echinococcus granulosus* can affect any organ in the body, and spillage during surgery can lead to a significant morbidity. Moreover, medical treatment should precede and follow the surgical intervention, to prevent recurrence.**

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