HYDATID CYST DISEASE (ECHINOCOCCUS GRANULOSUS): EXPERIENCE AT ASIR CENTRAL HOSPITAL

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درسنا خلال ٦ سنوات بدات منذ افتتاح مستشفى عسير المركزي عام ١٤٠٨ هـ الموافق ١٩٨٨ م ٤٣ حالة مرضية دخلوا المستشفى لإصابتهم بكيسات مائية سببها المكورات المشوكة ، لايوجدفي العينة المدروسة خلاف جوهري بالنسبة للجنسين والعمر المتوسط للمرضى ٧, ٤١ سنة. تتعلق التظاهرات السريرية عادة بالعضو المصاب ويؤكد التشخيص عادة التصوير الطبقي المحوري. تعطي التحاليل المخبرية في بعض الأحيان نتائج سلبية خاطئة ويرجع معظم المصابين في منطقة عسير من منطقة أبها، والعضو الأكثر إصابة هو الفص الكبدي الأيمن. خضع جميع المرضى لاستكشاف جراحي و استئصال للكيسة المائية إذا كان بالإمكان وبصورة آمنة وإلا اكتفينا بفتح الكيسة وتفجيرها فقط. متوسط المكوث بالمستشفى ١٧ يوم. نعتقد أن أول خط علاجي هو الجراحة وخصوصا عندما تكون الكيسة كبيرة وذلك بسبب قصر مدة العلاج ولقلة المضاعفات والوفيات نسبيا.

In a six-year period, starting from the commissioning of Asir Central Hospital in 1408 H (1988), 43 cases of hydatid cyst disease caused by *echinococcus granulosus* seen in Asir Central Hospital were studied. The pattern was not significantly different from other workers' experiences. There was equal sex distribution and the average age was 41.7 years. The clinical presentations depended essentially on the organs affected, and computed tomography usually confirmed the diagnosis. The serological test at times gave a false negative result. Most of the patients came from Abha in Asir region and the most commonly involved organ was the right lobe of the liver. All the patients had laparotomy, excision or incision and drainage of the cyst, depending on whether the cyst could be safely excised or only drained. The average hospital stay was 17 days. We believe that surgical intervention should be the first line of treatment especially when the cyst is large. *(Saudi J. Gastroenterol 1997;3(3):140-143).*

Hydatid cyst disease caused by *echinococcus granulosus* is not an uncommon condition in Saudi Arabia (1,2). However, this disease has not been studied in any health care center located in the Asir region, a predominantly agricultural area with a population of 1,200,000 and covering an area of about 80,000 km^2 in the south-western region of Saudi Arabia (3) (Fig. 1).

Patients and method

Forty-three cases of hydatid cyst disease treated over a six-year period at Asir Central Hospital from 03/04/1408 H to 06/08/1414 H were analyzed. The case notes were studied with regards to the age-group distribution, nationality, sex and the duration of hospital stay. The clinical presentation, the location of the hydatid cyst and the occupation of the patients were also noted. More importantly, emphasis was placed on the area where the patient lived, and whether there was any contact with domesticated animals. All the patients had laparotomy, surgical excision or incision and drainage of the cyst.

Results and findings

The youngest patient was seven, and the oldest was 90 years of age. Average age of the patients was 41.7 years. The highest incidence of the disease was found in the third, fifth and seven decades, each with eight patients (18.6%). There were six patients (14%) in the sixth decade, five patients (11.6%) in the second decade and four patients (9.3%) over the age of 70 years. Only one patient (2.3%) was seen in the first decade.

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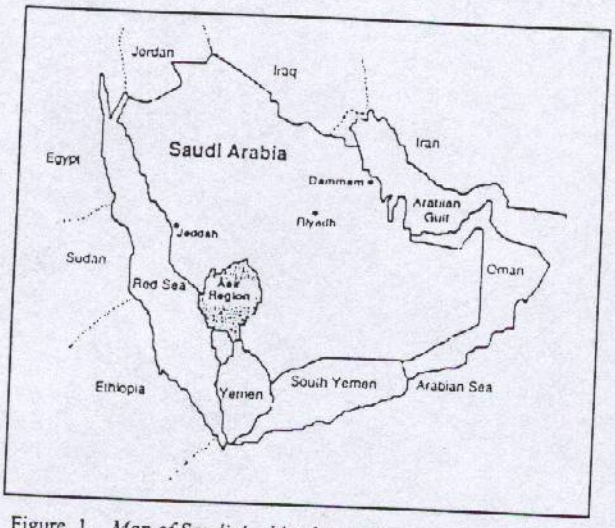

Figure 1. *Map of Saudi Arabia,showing the location of the Asir Province.*

Thirty-seven (86%) patients were Saudi nationals and the rest were expatriates temporarily working in Saudi Arabia. Two patients (4.7%) were Egyptians, three (7.0%) were Yemenis and one (2.3%) was Syrian. Of the total patients, 21 (48.8%) were males and 22 (51.2%) females.

The clinical presentation depended on the location of the hydatid cyst. All the patients with the hydatid cyst located in the right lung presented with right-sided chest pain and cough which sometimes was productive of blood-tinged sputum. All the patients with the cyst located in the upper abdominal viscera presented with vague upper abdominal discomfort, epigastric pain sometimes, and in some cases, the presence of a mass in the upper abdomen.

The patient with hydatid cyst of the upper pole of the right kidney presented with right loin pain, right loin mass and hematuria. The patient with hydatid cyst of the abdominal cavity presented with an asymptomatic abdominal masses.

Ultrasonography was usually highly suspicious, but computed tomography (C-T) often confirmed the diagnosis (4-7) by the typical appearance (Fig.2). Serology test was positive in 25 patients (58.1%), negative in three patients (7.0%), and was not done in 15 patients (34.9%). The serology tests performed were indirect hemaglutination test (IHA) and by EM2 ELISA. It was not done in some patients because of lack of reagent when they were admitted.

History of close intimacy with sheep, goat or dog was elicited in 38 patients (88.4%). The highest number of patients came from Abha area, 15 (34.9%) (Table 1). The 43 patients had a total of 48 cysts since multiple organs were involved simultaneously in some patients.

The most commonly affected organ was the right lobe of the liver, (43.8%) followed by the left lobe of the liver (18.8%) and the right lung (16.7%) (Table 2).

There was no mortality and no significant morbidity. The period of hospitalization was between 8 and 34 days with an average of 17 days. The follow-up period without recurrence ranged between three months and four years. Average follow-up period was 2.7 years.

Table 1. *Hydatid cyst disease (Echinococcus granulosus) : experience at Asir Central Hospital (where the patients came from)*

Abha area	15	(34.9%)
Najran	5	(11.6%)
Khamis Mushayt	5	(11.6%)
Muhail area	4	(9.3%)
Zahran Al Janoub	2	(4.7%)
Sarat Abeida	2	(4.7%)
Majarda	2	(4.7%)
Al-Basheyer	2	(4.7%)
Al-Shehay	1	(2.3%)
Al-Namas	1	(2.3%)
Al-Tarah	1	(2.3%)
Unknown location	3	(7.0%)
	43	

Table 2. *Hydatid cyst disease location of the cyst.*

Right lobe of liver	21	(43.8%)
Left lobe of liver	9	(18.8%)
Right lung	8	(16.7%)
Spleen	4	(8.3%)
Colon/Gastrocolic ligament	1	(2.1%)
Mesentery	1	(2.1%)
Right kidney	1	(2.1%)
Left kidney	1	(2.1%)
Left ureter	1	(2.1%)
Intra-abdominal cavity	1	(2.1%)
Total Number of Cysts	48	

Discussion

The pattern of hydatid cyst disease seen in this area during the period under review was not much different from what others have reported (1,2). The cyst occurs mainly in the liver and on some occasions it may bypass the liver "filter" to get entrenched in the lungs. Clinical features for this disease are varied and not specific. They depend essentially on the location 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. For example, a primary involvement in the liver may spread to involve the diaphragm and the lungs (8).

The typical C-T scan appearance tends to confirm the diagnosis (4-6). All our patients were correctly diagnosed by C-T scan (Fig. 2) and this seems to be the experience of some other workers too (4-6,9).

All our patients were successfully treated surgically by resection or by aspiration after laparotomy. The decision whether to excise or drain the cyst depends on the location of the cyst. When the cyst is located within the liver drainage is advised, but when it is relatively isolated in the mesentery, it can usually be excised. The number and size of cysts are not of much importance in determining whether to excise or only drain the cyst. It is the accessibility of the cyst that determines whether to excise or just drain the cyst. There was no mortality and no significant morbidity. We think the much often talked about anaphylaxis reaction associated with drainage of hydatid cyst is probably over stated. Other methods of treatment that had been advocated for hydatid cyst include the use of albendazole (10), praziquantel (11), combination of praziquantel and albendazole (2,6), and percutaneous aspiration and drainage of the cyst (12-14).

We do not share the view that chemotherapy is preferred to surgical excision or drainage (15). Actually, we agree with others (8) that surgical management is preferred, especially, for large cysts for the following reasons: period of hospitalization, and therefore, period of cure for the disease is about 17 days on the average, and the recurrence rate after surgery is low, yet surgical intervention does not carry much morbidity.

However, we also agree with other workers that (6) postoperatively, drugs should be routinely administered for various length of time, because of high rate of recurrence (8,15,16).

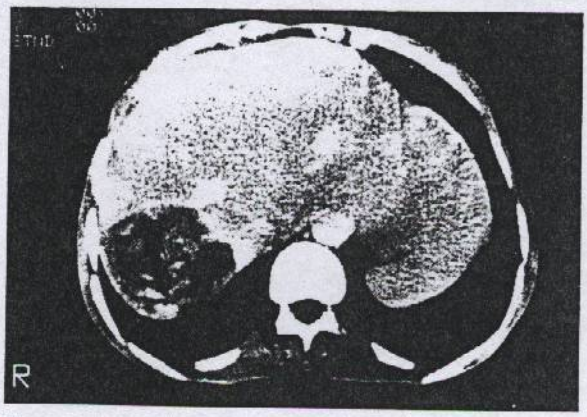

Figure 2. *CT scan showing the typical appearance of hydatid cyst in the right lobe of the liver.*

Conclusion

The pattern of hydatid cyst disease seen in Asir region is not different from those reported from other parts of Saudi Arabia or elsewhere in the world.

Computed tomography is reliable in confirming the diagnosis (4-6). Serological test may sometimes give a false negative result (17).

Because of the relatively short period of hospitalization, low incidence of recurrence and the size of the cyst we usually encounter, we advocate surgical excision or drainage as the first line of treatment and we think this is the most reliable form of treatment.

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