

MULTI HYDATID OF PAROTID, BRAIN AND KIDNEY; REPORT OF A CASE

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ABSTRACT

An interesting case of rare multiple hydatid of parotid, brain and kidney is reported. She is a 35-year-old married woman first referred because of a swelling in the parotid region and later for neurological manifestations. On general physical examination, an abdominal mass was felt in the right hypochondrium. These multiple space-occupying lesions in the brain, kidney and parotid proved to be hydatid cyst. A short discussion on the classification of hydatid multiple localisation and the different ways that the parasite could reach different organs is given and the control measures are highlighted.

INTRODUCTION

Human parasitism by *Echinococcus* is one of the major health problems, not only in the Middle East, but to some extent in other countries as well.

Parotid localization of hydatid disease is very rare and has not been reported previously in Iran.

Few reported cases could be found in foreign literature (1).

Hydatid of brain and kidney and multiple localization in these rare sites are also not so common.

CASE-REPORT

First admission: A 35-year-old married woman referred to the hospital because of a swelling in front of the right ear with pain and itching of the skin over it.

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She had been well until a year ago, when she developed the swelling which gradually increased in size. Physical examination revealed an enlarged, mobile, parotid gland with varied consistency in different parts. All other physical findings were normal. The haemoglobin was 13 grams per 100 ml, R.B.C. 4,600,000 and W.B.C. 8400 per CU mm, polymorphs 56%, lymphocytes 40%, Monocytes 4%. Urinalysis, blood urea and sugar were normal. Skull and chest X-rays showed no pathologic changes a presumptive diagnosis of neoplasm of the parotid gland was made. Surgery with incision in the preauricular region extending forward beneath the angle of the jaw showed a hydatid cyst. The facial nerve was identified, then the whole cyst was removed and the area of the operative field was washed with with hypertonic saline.

Second admission (7 months later) : The patient was referred 7 months later with numbness, fine tremor, parasthesia and weakness of the right upper and lower limbs.

She gave a history of dimness of vision and double-vision about two years previously. Vision was 6/9 in both eyes.

Foundi showed papilledema and atrophy of the optic nerves being well marked on the left. The general physical and neurological examination revealed an abdominal swelling in the right hypochondrium. The swelling did not move with respiration. It was a firm ballotable mass which was dull to percussion. The liver and spleen were not felt. There was no free fluid in the abdomen. Hyder-reflexia, impaired sensory perception and lessened abdominal reflexes on the right side with a positive babinski toe signe were the only neurological signs present.

Investigation: Haemoglobin, leucocyte count, blood urea and sugar, SGPT, SGOT, bleeding, coagulation prothrombin time and urinalysis were all normal.

The wright and widal tests were negative. The casoni test was positive. A plain radiogram of the abdomen showed a circumscribed soft tissue shadow in the right hypochondrium and right loin.

An intravenous pyelogram showed a non-functioning right kidney, with distorted pelvis and calices, that appeared to be pushed upward. From this, it was concluded that the swelling might be a tumoral mass of the kidney. A cholangiogram did not show the gall bladder. The chest X-ray revealed no abnormality except for a shadow in the right hypochondrium. The skull X-ray was normal. The right kidney angiogram revealed a lucent area in the lower half of the kidney consistant with a simple cyst or hydatid. Cerebral angiograms showed the sylvian triangle pushed downward and the cerebral internal artery deviated to superoposterior aspect, which suggested a space-occupying lesion in the third ventricle or aqueduct.

The patient came to Teheran with the presumptive diagnosis of hydatid disease of brain and kidney and, after a successful operation, return to Isfahan in good health. The pathological report of the brain and kidney cysts confirmed

the diagnosis.

DISCUSSION

Hydatid disease is usually acquired in childhood and it may take from 5 to 20 years before it is diagnosed. The symptoms and effects depend on the site of infestation. Multiple hydatid cysts may be of primary or secondary type, i.e. if the patient has been in close contact with the definitive host he may have ingested many ova and thus many larvae will have been driven by the blood stream into various parts of the body.

Although the oncospheres are attacked by leucocytes and many of them are probably phagocytised some, however, survive and develop into multiple hydatids. On the other hand, multiple cysts in different organs may be due to a rupture of a primary cyst. Sometimes these multiple cysts are identified at one stage and sometimes at different times.

According to Azizi (2), who reviewed the case histories of 1950 cases of hydatid cysts operated on in various hospitals in Tehran, 2.56% of the cysts were found in the kidney, 2% in the brain and none in the parotid. Bickers (1970) reported a review of 532 cases of hydatidosis from Lebanon, of which 1.3% of the cysts were found in the brain, 3.19% in the kidney and only 0.19% in the parotid. Bahmani (6) reported 41 cases of hydatid cyst at Soraya Hospital in Isfahan during period of 7 years from 1962 to 1969, which did not include any cases of kidney or parotid and only 2 cases of brain. From the point of symptomatology, hydatid cyst in the brain is more common in children than in adults (5), and takes the form of a space-occupying lesion with headache, papilledema, convulsions and focal signs depending on the situation of the cyst (4, 5). Hydatid cyst of the kidney may give rise to a tumor in the loin exactly resembling a hydronephrosis, and would usually be diagnosed as such (7). The discovery of hooklets or hydatid elements in the urine, or in the fluid aspirated from a renal cyst, will point to the nature of the disease. Sometimes hydatid disease of the kidney simulates a movable kidney. Renal albuminuria and attacks of renal colic with hematuria have been observed in some cases, but in others, before the cyst has ruptured into the pelvis, the only evidence of its presence may be a renal swelling.

From the point of prevention of hydatid disease in man, this depends upon his ability to keep the gut of the dog population free from the cestode worm, *Echinococcus granulosus*. In urban areas, inspectors usually thoroughly examine the meat in the abattoirs. However, the sheep eaten in rural and desert areas by farmers are sometimes slaughtered privately. Furthermore, there is no proper control on the excreta of dogs, cats and other domestic animals.

This explains why most of our patients are farmers or live in the desert. Prevention of hydatid disease in sheep, cattle and camels should go hand-in-hand with control of the disease in dogs and man.

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