CASE REPORT

Hydatid cyst of the neck. A case report and literature review

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Abstract Echinococcosis or hydatid disease is a zoonotic infection caused by Echinococcus granulosus. It has been recognized by humans for centuries, as it was described by Hippocrates more than two thousand years as a “fluid-filled liver”, and the famous Arabian physician Al-Rahzes described it, but it took till the 17th century when Francesco Redi illustrated that the hydatid cysts of echinococcosis were of animal origin. Hydatid disease is endemic in the Middle East, India, Africa, South America, New Zealand, Australia, Turkey and Southern Europe keeping in mind that it can occur also in non-endemic countries because of the upsurge of emigration and trade. The primary hosts are dogs. Intermediate hosts are sheep, cattle, horses and occasionally man.

Hydatid cyst develops most frequently in the liver (65%), the lungs (25%), and the remaining 10% occurs in muscle, spleen, bones, kidneys, brain, eye, heart, and pancreas. Multiorgan involvement is seen in 20–30% of the cases with involvement of the liver in all cases. Occurrence of hydatid cyst is extremely rare in the head and neck region even in geographical areas where echinococcal infestation is frequent. Only a few cases of hydatid cyst located in head and neck have been reported in the literature.

We will present our experience in treating a case of hydatid cyst located in the neck area, which is considered one of the few cases published due to the relative rarity of the disease in the fore mentioned anatomical location.

1. Introduction

Echinococcosis or hydatid disease is a zoonotic infection caused by Echinococcus granulosus. It has been recognized by humans for centuries, as it was described by Hippocrates more than two thousand years as a “fluid-filled liver”, and the famous Arabian physician Al-Rahzes described it, but it took till the 17th century when Francesco Redi illustrated that the hydatid cysts of echinococcosis were of animal origin. Hydatid disease is endemic in the Middle East, India, Africa, South America, New Zealand, Australia, Turkey and Southern Europe keeping in mind that it can occur also in non-endemic countries because of the upsurge of emigration and trade. The primary hosts are dogs. Intermediate hosts are sheep, cattle, horses and occasionally man.
Hydatid cyst develops most frequently in the liver (65%), the lungs (25%), and the remaining 10% occurs in muscle, spleen, bones, kidneys, brain, eye, heart, and pancreas.\textsuperscript{6,7} Multorgan involvement is seen in 20–30% of the cases with involvement of the liver in all cases.\textsuperscript{8} Occurrence of hydatid cyst is extremely rare in the head and neck region even in geographical areas where echinococcal infestation is frequent. Only a few cases of hydatid cyst located in head and neck have been reported in the literature.\textsuperscript{9,10}

We will present our experience in treating a case of hydatid cyst located in the neck area, which is considered one of the few cases published due to the relative rarity of the disease in the fore mentioned anatomical location.

2. Case report

A 20 year old Nepalese male, who is not known to have any medical history, presented to the Oral and maxillofacial Surgery department in Hamad Medical Corporation, Doha, State of Qatar, with a chief complaint of a right neck swelling, noted about 6 month back. The general condition of the patient was good; he had no history of fever or weight loss. The patient lived almost his entire life in his home country Nepal, before recently moving to Doha. He reported that the swelling was gradually increasing in size but never caused pain or discharge.

Clinical examination revealed a well-defined, non-tender right upper neck swelling of about 5 cm in diameter, systemic examination was unremarkable, Fig 1.

Computed Tomography Scan showed a well-defined large cystic lesion involving the right upper neck area, of about 3.3–4.5 cm in size and the report favored an infected branchial cyst, laboratory investigations were within normal values, Figs. 2 and 3 shows axial and coronal views (respectively) of the cyst, excisional biopsy was planned and discussed with the patient. The surgical procedure was successfully executed and the postoperative course was uneventful.

Other body parts were scanned, and a calcified hydatid cyst was found in the abdomen, for which he was referred to the infectious disease team for further management.

3. Discussion

Hydatid cyst is endemic in the Middle East, India, Africa, South America, New Zealand, Australia.\textsuperscript{4} Though the State of Qatar is not among the endemic countries for the disease, nevertheless, this patient, in addition to some other cases in other anatomical locations, were reported, and the reason for that is the high emigration rate within the last 3 decades due to the fast expansion in the country.

Al-Ani et al reported a Case of Echinococcosis in a pregnant lady with an unusual presentation. The disease occurred in the lungs and liver and was treated surgically following delivery. According to same study echinococcal disease is seen mainly in people coming from endemic areas and the disease is rare among Qataris.\textsuperscript{11}

Occurrence of hydatid cyst is extremely rare in the head and neck region even in geographical areas where echinococcal infestation is frequent, and only few cases have been reported in the literature.\textsuperscript{6,7} Hydatid cysts are usually not considered in
the differential diagnosis of head and neck cystic swellings, especially in non-endemic areas in the absence of hydatid disease elsewhere in the body. The rarity of the disease in this anatomical location presents a diagnostic difficulty for the physician if he or she is not familiar with the disease.

If the cysts ruptured while in the body, whether during surgical extraction or by some kind of trauma to the body, the patient would most likely go into anaphylactic shock. This event didn’t occur in the patient included in the study.

Standard treatment modality is surgical removal of the cysts combined with chemotherapy using albendazole and/or mebendazole before and after surgery, albendazole is preferred twice a day for 1–5 months.

4. Conclusion

When dealing with well-defined cystic lesions in the head and neck area hydatid cyst should be considered in the differential diagnosis even in non-endemic areas due to the high emigration rates. Care should be taken by the operating team during surgery as ruptured cyst may cause anaphylactic shock.

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Conflict of interest

None declared.

References