

Primary hydatid cysts at unusual places: A case series

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Introduction

Hydatid disease is a parasitic infection caused by larval stage of *Echinococcus granulosus* in human. The most frequently involved organ is the liver (65%), other organs involved are the lungs (25%) and, less frequently, the spleen, kidneys, heart, bone and central nervous system and head and neck region [1]. Hydatid disease in the head and neck region is very rare even in endemic areas, and only a few case reports were found in the literature. Herein, we report a case series of Hydatid cyst at unusual sites especially in head and neck, breast and discuss diagnosis and management.

Case report (1)

A thirty year old man presented with swelling in right intraauricular region without history of facial pain or weakness, fever or weight loss without any past significant medical history. Physical examination revealed a 4×3-cm solid mass that was immobile, painless and had grown progressively over six months. Routine laboratory and serological investigations were within normal limit. Fine-needle aspiration cytology (FNAC) of the mass yielded no definitive diagnosis. Therefore, after obtaining an informed consent; we decided to perform resection of the mass with or without superficial parotidectomy. At the operation, the cystic mass pushing the superficial part of the right parotid gland was demonstrated. Histopathological examination confirms the diagnosis of hydatid cyst (Fig1 and Fig2). The patient is given Albendazole 400 mg for three months.

Case report (2)

A thirty year old woman presented with gradually increasing neck swelling for one year. On examination the swelling was smooth and cystic of 4-5 cm in vertical diameter and 3-4 cm in horizontal diameter (oval) at suprasternal notch and extending more on left side, moving with act of deglutition. FNAC of swelling diagnose it as hydatid cyst. All routine investigations and thyroid function were within normal limit except ESR which was slightly raised. CECT of head and neck reveal hydatid cyst in neck, below the left lobe of thyroid gland. Surgical excision of cyst was done. Intravenous corticosteroid was given preoperatively to prevent anaphylaxis.

Case report (3)

A forty year old man presented with painless, gradually increasing swelling in the left Submandibular region for one year. On physical examination, there was a swelling 6 × 3 cm in size, ovoid in shape having well defined margin with normal appearance of overlying skin. Routine blood investigations were within normal limit except eosinophilia (21%). FNAC of the aspirated fluid gives the diagnosis of hydatid cyst. On ultrasonography, a cystic lesion with a regular contour and double membrane was observed. Surgical excision of the cyst was done. On exploration when the gland was being freed from the surrounding structures cheesy material came out from the gland. Cysts were intact and did not burst. Submandibular gland was dissected out. Haemostasis was secured, and wound was closed in layers.

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Figure 1. Gross specimen of a hydatid cyst of the parotid gland

Case report (4)

A twenty five year old woman presented with a lump in the upper outer quadrant of the left breast for six months. Physical examination revealed a 4x 5 cm, firm, and mobile mass, with no axillary lymphadenopathy. FNAC aspirated clear fluid which was acellular. The clinical diagnosis was consistent with a fibrocystic disease of breast and a decision was made to perform excision biopsy of the lump. Surgery revealed a solid cystic mass with a dense surrounding fibrous tissue. Complete excision was performed. Post-operative indirect hemagglutination serologic testing for *E. Granulosus* revealed a high titre of 1/800. Histopathological examination confirmed the diagnosis of hydatid disease.

Discussion

Hydatid disease is a parasitosis known as hydatidosis or Echinococcosis caused by the larval stage of the cestode tapeworm *E. granulosus* or *E. multilocularis*. Human beings are the incidental intermediate host. Hydatid cyst is rare in the head and neck area. One case with preauricular hydatid by Muhhamet Tekin et al [1] and hydatid parotid was reported by Mohsen darabi et al [3]. The diagnosis of hydatid disease has previously been based on a history and clinical findings where the clinical findings are too nonspecific to be diagnostic. In our cases series,

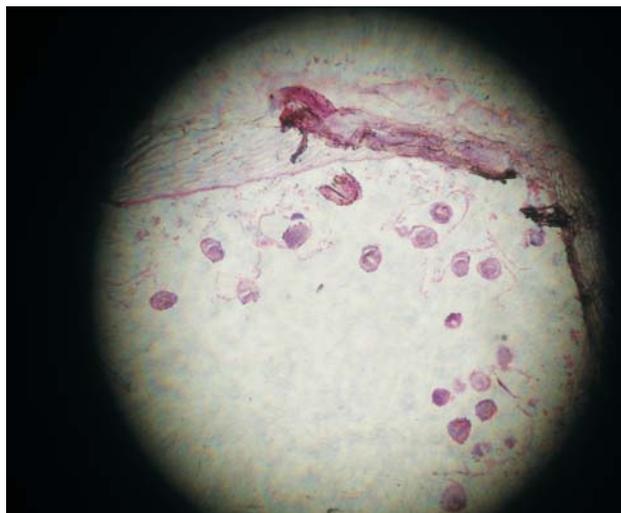


Figure 2. Microscopy of a parotid hydatid cyst. (H&E stain, 40 magnification)
Blue arrow- Acellular laminated external layer, Saffron arrow Scoleces of *E. Granulosus*

diagnosis was based mainly on imaging and HPE; only in few cases biologic or serologic tests were also performed. Discrepancies between radiological imaging and serological diagnosis are best resolved by cytology of the drained fluid and or Histopathological examination of the excised cyst [8]. Performing aspiration on the cyst for diagnosis has not been advised because of the potential to precipitate acute anaphylaxis or to spread daughter cysts. However, some argue that no sequelae were observed that could be attributable to aspiration if done for the diagnosis of hydatid cyst. Agarwal et al [4] reported that one patient went into anaphylactic shock following the liver fine-needle aspiration procedure. Surgery, conservative or radical, is still the treatment of choice for all locations of the disease. In addition, careful aspiration of most of the hydatid cyst fluid before injecting the scolicidal agent into the cyst is recommended. Until now it has not been clearly stated in the literature if there are benefits to minimal surgery compared to radical surgical treatment [9]. In this study, no significant impact of the surgical technique on duration of hospitalization and post operative complication was found. Surgery with adjuvant therapy seems to remain the optimal method of treatment [10]. Laparoscopy is considered to be another alternative for treating hydatid disease of the liver [11].

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Key Learning Points

- Hydatid disease is a parasitosis caused by the larval stage of the cestode tapeworm *E.granulosus* or *E.multilocularis*. Human beings are the incidental intermediate host.
- Hydatid disease is rare in the head and neck region. However, it should be considered in the differential diagnosis of a swelling in this region.
- Surgery, conservative or radical, is still the treatment of choice for all locations of the disease.