CASE REPORTS

CASE REPORT: CERVICAL HYDATID DISEASE

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ABSTRACT

A 24 years old female presented with complaints of neck pain and progressive paraparesis. Her MRI cervical spine showed multiple cystic lesions in prevertebral regions at C1 and C2 levels with extension into neural foramina bilaterally. This proved to be hydatid disease based on per-operative and serological findings. Although hydatid disease is a common condition but it rarely involves cervical spinal cord. High index of suspicion is necessary for prompt diagnosis and early management of a treatable cause of spinal cord compression.

Keywords: Hydatid disease, Cervical, Echinococcus, MRI.

INTRODUCTION

Hydatid disease due to Echinococcus granulosus involves bone in about 1% of all cases. Neural compression is common in vertebral hydatidosis[1] in the form of paraplegia or nerve root compression with relatively good prognosis if treated early. Isolated occurrence of cervical hydatid disease without any evidence of visceral disease is very rare. A search of the literature revealed only 12 cases of isolated cervical hydatid disease[2]. Due to its uncommon prevalence the diagnosis is often overlooked in the differential diagnosis for paraplegia. However, by performing neuroimaging this potentially curable disease can be picked up. In some patients the spinal hydatid cysts can grow to enormous sizes but clinically remain asymptomatic for years.

A case of 24 years old female is being presented here who was referred to us for MRI neck by a clinician of CMH Multan with complaints of pain in neck and paraparesis.

CASE REPORT

The patient had a history of pain in nape of neck and progressive paraparesis for 15 days, with off and on history of fever.

Her contrast-enhanced magnetic resonance imaging of cervical spine was done which revealed a large bunch of cystic, multiloculated, walled off lesions collectively and approximately measuring 71 x 17 x 77mm (CC x AP x T) in size (figure). They were predominantly located in the prevertebral regions with extension into the neural foramina bilaterally at the level of C1, C2, causing minimal cord compression at this level. A sequestrated cyst slightly away from the main lesion was seen measuring (13 x 16mm) in size,

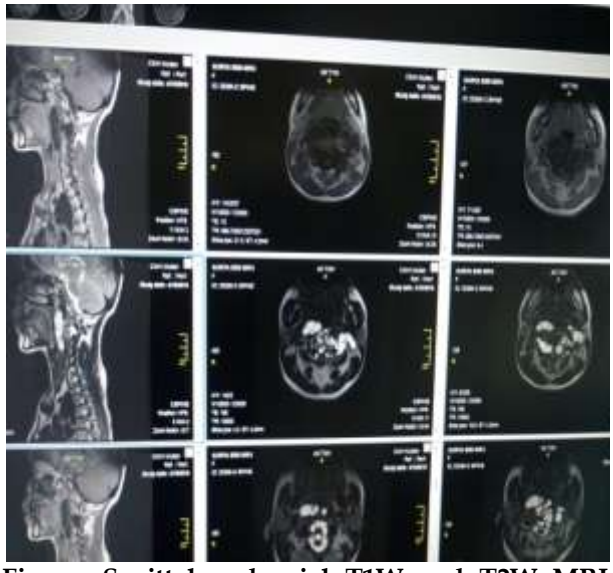

Figure: Sagittal and axial T1W and T2W MRI images showing large bunch of multiloculated cystic lesions, predominantly involving prevertebral regions with extension into bilateral neural foramina at C1 and C2 level with mild cord compression.

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involving left longissimus capitus muscle inferiorly and close to the left parotid gland superiorly. The right prevertebral extent of the disease was causing compression of right laryngeal inlet from behind.

On the basis of MRI findings differential diagnosis of lymphangiectasia, caries spine and extradural intraspinal cervical hydatid disease type 3 (Braithwaik and Lees) was suggested. However, on follow up per-operative and serological reports, the diagnosis of hydatid disease was confirmed.

DISCUSSION

Echinococcus affecting spine was first described by Churrier in 1807[3]. Primary spinal hydatid disease is

rare and represents an uncommon but significant manifestation of hydatid disease. It is caused by parasite echinococcus granulosusa helminth belonging to the cestode group[4,5].

Hydatidosis spreads to spine by direct extension of pulmonary or abdominal infestation and rarely involves spine primarily. Thoracic spine is involved in 50% of cases of spinal hydatid cyst followed by 20% each in lumber and sacral spine. Cervical spine is involved in 10% cases[6]. It is a common cause of spinal cord compression in endemic areas. Preoperative diagnosis by imaging is essential because the rupture and dissemination may result in anaphylaxis[7].

Primary extradural hydatid disease is rare. Initially hydatidosis involves soft tissue and then spreads to bones. Braithwaik and Lees classified these lesions in five types

- Primary intramedullary hydatid cyst.
- Intradural extramedullary hydatid cyst.
- Extradural intraspinal hydatid cyst.
- Hydatid disease of vertebrae.
- Paravertebral hydatid disease.
- Among these 1st three types are common[4].

The diagnosis of hydatidosis is based on clinical presentation, pervious history of hydatid cyst and radiological imaging with final confirmation by histopathological reports. MRI is the modality of choice due to superior soft tissue resolution. The lesion appears as a bunch of grapes or multiple cystic cavities[8]. The MRI signal characteristics of the cystic content are similar to that of CSF. On T1-weighted images, the cystic wall appears slightly more hypointense to cystic content and enhances very slightly after administration of gadolinium. The initial treatment of choice is surgical decompression by laminectomy, debridement of the paravertebral lesions and removal of the entire cysts. The treatment for recurrent cyst is again repeated surgery with extensive resection and with more proper medical treatment with effective agents[9,10].

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

REFERENCES

1. Gopal NN, Chauhan SP, Yogesh N. Primary spinal extradural hydatid cyst causing spinal cord compression. Indian journal of orthopaedics 2007; 41(1): 76-8.
2. Khare P Kala P, Gupta R, Chauhan N. Isolated Echinococcosis of cervical region. Journal of cytology/Indian Academy of Cytologists 2014; 31(2): 102-04.
3. Polat P, Kantarci M, Alper F, Suma S, Koruyucu MB, Okur A. Hydatid Disease from Head to Toe 1. Radiographics 2003; 23(2): 475-94.
4. Braithwaite PA, Lees RF. Vertebral hydatid disease: radiological assessment. Radiology 1981; 140(3): 763-6.
5. Govender TS, Aslam M, Parbhoo A, Corr P. Hydatid Disease of the Spine: A Long-Term Followup After Surgical Treatment. Clinical orthopaedics and related research 2000; 378: 143-7.
6. Işlekel S, Erçşahin Y, Zileli M, Oktar N, Öner K, Övül İ et al. Spinal hydatid disease. Spinal Cord 1998; 36(3): 166-70.
7. Govender TS, Aslam M, Parbhoo A, Corr P. Hydatid Disease of the Spine: A Long-Term Followup After Surgical Treatment. Clinical orthopaedics and related research 2000; 378: 143-7.
8. Tekkök IH, Benli K. Primary spinal extradural hydatid disease: report of a case with magnetic resonance characteristics and pathological correlation. Neurosurgery 1993; 33(2): 320-3.
9. Kamat AS, Thompson C, Husien MB. Staged Surgical Management in the Treatment of Primary Epidural Hydatidosis of the Spine: A Case Series and Review. Cureus 2015; 7(12): e401.
10. Sahlu A, Mesfin B, Tirsit A, Wester K. Spinal cord compression secondary to vertebral echinococcosis. Journal of neurosciences in rural practice 2016; 7(1): 143-6.