

## MR FEATURES OF HUGE GLUTEAL HYDATID CYST: A CASE REPORT

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**ABSTRACT**

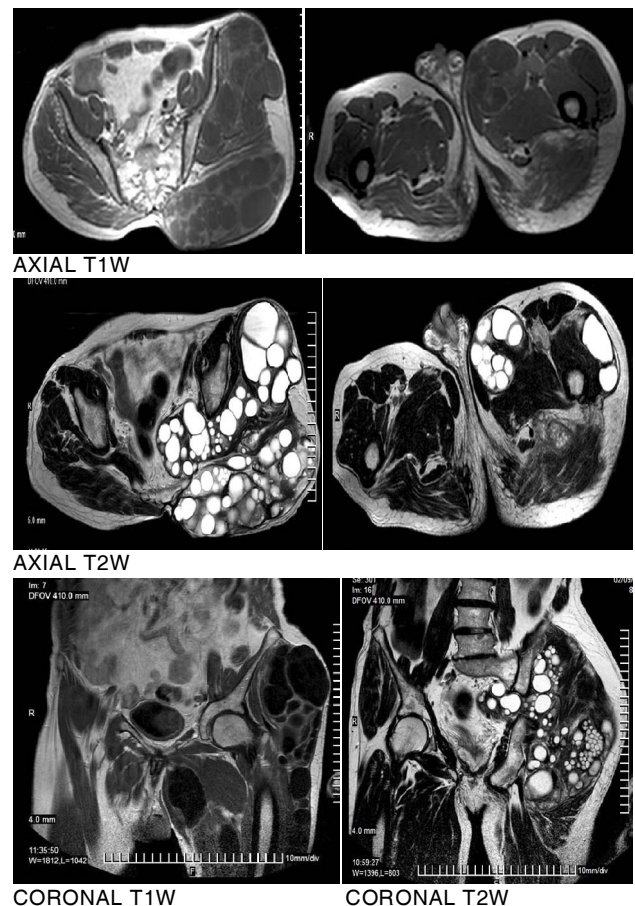
Hydatid cyst is a zoonotic disease caused by *Echinococcus Granulosus* or *Echinococcus Multilocularis*. Musculoskeletal hydatid cysts comprise only about 0.7 - 3% of all hydatid cysts. Enlarged hydatid cyst usually presents with pressure symptoms to adjacent organs. Intramuscular manifestation may mimic a soft tissue tumor leading to inappropriate cyst rupture with the risk of anaphylaxis and dissemination to adjacent organs, thereby signifying the importance of early radiological diagnosis and prompt treatment. We present a 25 yrs old male who presented with a huge swelling in left gluteal region which on MRI revealed its hydatid origin.

**Case Presentation**

A 25 years old male presented with complaint of swelling in left gluteal region for 7 months. The swelling was mobile, non-tender and showed gradual increase in size. After 1 month, patient suffered from dribbling of urine. Patient ignored the symptoms and took homeopathic medicines for remedy. 1 day back patient suddenly suffered from left sided foot drop and came in the emergency department.

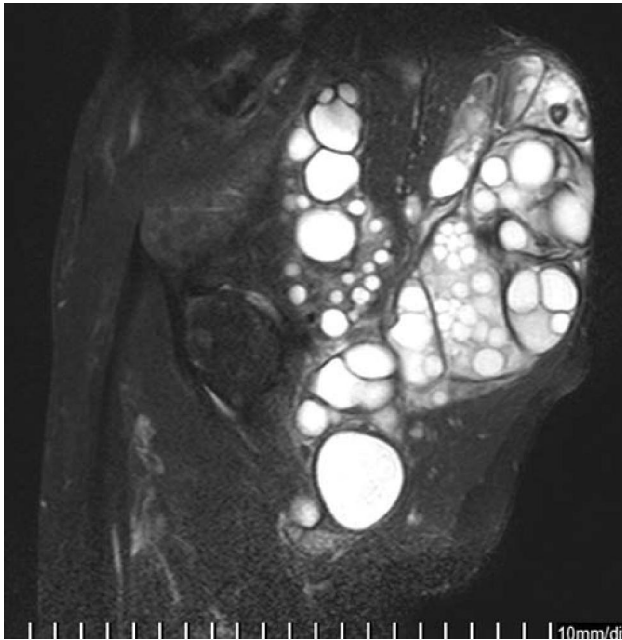
The patient was referred for MRI. MRI revealed a cystic, multi-loculated lesion, low signal on T1W and high on T2W and STIR images involving the left glutei, adductor longus, adductor brevis, vastus lateralis and gracillis with extension into pelvic cavity through left sciatic foramen. Coronal and Sagittal STIR sequences confirmed the fluid consistency of the cysts. Coronal T1W and T2W images revealed extension of the lesion into the pelvic cavity (Fig. 1 and 2).

Unfortunately, the patient was lost to follow-up.



**Figure 1:** Images from MRI pelvis of the patient showing multiple T1 hypointense and T2 hyperintense cystic lesions involving left gluteal muscles.

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SAGITTAL STIR

**Figure 2:** Sagittal STIR sequences confirmed the fluid consistency of the cysts.

## Discussion

The usual primary sites of hydatid disease are the liver and the lungs with the less common ones being the bone, heart, central nervous system, spleen and muscles. Hydatidosis affecting the muscles without the evidence of the disease in liver or lungs is rare.<sup>1,2,3</sup> A case of primary hydatid cyst of the vastus lateralis muscle was described by Kocakusak et al.<sup>4</sup> Another case of primary hydatid cyst in the supraspinatus muscle was reported by Tatari et al.<sup>1</sup>

The exceptional nature of primary muscle localization concerns diffusion of the infecting embryo; the most reliable hypothesis is that the liver and lungs can be bypassed through pre-capillary anastomosis between pre- and post-parenchymal circulation.<sup>5</sup> The muscle environment is not favorable for the growth of hydatid larvae but the volume of the muscle mass and its rich blood supply could explain the exceptional nature of localization in the proximal muscles of the lower limbs.<sup>6</sup>

Pre-operative diagnosis of hydatid disease may be made on ultrasound and confirmed by CT scan. Sonographically they have a thin or thick wall resembling the pericyst with internal echoes.

Multiple echogenic foci due to hydatid sand may be evident giving the "snow storm" sign.<sup>7</sup> Simple cysts do not demonstrate internal structure. On CT scan they appear as a well-defined cystic lesion with daughter cysts, may contain septae or debris in it with no enhancement on intravenous contrast. MRI typically shows a thin, low intensity rim, probably representing the pericyst which is rich in collagen and is generated by the host.<sup>7</sup> Lewell<sup>8</sup> classified hydatid cysts into three types according to their imaging appearance. Type I is a fluid filled cyst-like structure, which may proceed to a Type II lesion if daughter cysts and/or matrix develop. Type III is mummified, inert calcified lesion. Surgical excision is the treatment of choice.

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