Case report

Primary Gluteal Intramuscular Hydatid Cyst - A Case Report.

Comment [DCC1]: The place and time of the research should be mentioned in the title of the article [India ……..].

ABSTRACT: Hydatid cyst is caused by tapeworm, Echinococcusgranulosus commonly occurring in the Liver and Lungs. We report a 68-year-old lady diagnosed with a primary gluteal hydatid cyst which on imaging showed intramuscular extension. En-bloc surgical excision of the cyst along with its capsule was done successfully. Albendazole was started preoperatively and continued postoperatively to reduce the risk of local recurrence. The patient showed no recurrence of the symptoms during the first week, first and second months after surgery follow up and in the final visit during the third month after surgery.

KEYWORDS: Hydatid cyst; Intramuscular; Gluteal swelling; Soft tissue swelling; Echinococcus; Albendazole; Recurrence.

INTRODUCTION: Hydatid cyst disease is a zoonotic larval infection of tapeworm (Cestode) Echinococcusgranulosus. It is characterised by the growth of hydatid cysts (Metacestode) in the organs of intermediate hosts like humans. Definitive hosts are carnivores like dogs. Ingestion of eggs or gravid proglottids by humans and other intermediate hosts which are excreted in the faeces of definitive hosts leads to active infection[1,2].

Geographically, it has a higher prevalence in the Mediterranean, Russia, China, North and East Africa, Australia and South America[1,2].

Signs and symptoms vary as per the site of the cyst. Most commonly occurring in the liver (>65%) and lungs (25%). However, it can also affect sites like bones, spleen, central nervous system and heart. Soft tissue involvement by hydatid cysts accounts for 2.4 to 5.3% of all hydatid cyst cases[3,1].

In this case report, we discuss a 58-year-old lady diagnosed with a primary gluteal intramuscular hydatid cyst.

CASE REPORT:

Comment [DCC2]: The patient's history should be explained more.

A 68 year old lady, resident of rural Kutch region; presented to the surgical outpatient department with complaints of right gluteal swelling from the past 30 years. It had gradually increased in size to cause discomfort while walking at present. It was not associated with pain, restricted movements of the right lower limb or neurological symptoms. On physical examination, it was a large palpable mass measuring approximately 10x10cm in the right gluteal region extending medially to the right groin as well. Ultrasonography of the swelling reported a well defined, loculated, cystic lesion measuring 9.1x6.3cm with internal septations suggestive of hydatid cyst. Magnetic resonance imaging of the pelvis was suggestive of intramuscular extension of the cystic lesion. Ultrasonography of abdomen and Chest radiograph eliminated presence of another cyst. Preoperatively, Albendazole was started 400 mg in two doses per day at 15 mg/kg/day. Surgical excision of the cyst was done successfully with intraoperative instillation of hypertonic saline into the cyst. Multiple daughter cysts were present inside the main cyst. A negative suction drain was kept inside to prevent seroma collection due to the large size of the cyst. Albendazole 400 mg in two doses at 15 mg/kg/day was continued postoperatively for 3 months after the surgery to prevent risk of local recurrence. Histopathological examination of the specimen confirmed

features consistent with hydatid cyst. Patient was discharged in hemodynamically stable condition on postoperative day 3 after removing the negative suction drain. Follow up after 1 week, 1 month and 3 months after the surgery did not reveal any signs of recurrence.

Fig.1 showing right gluteal swelling measuring approximately 10x10cm.

Fig.2 intraoperative picture of hydatid cyst.

Fig.3 Multiple daughter cysts.

Comment [DCC3]: Original images must be used. Copyright law must be respected.

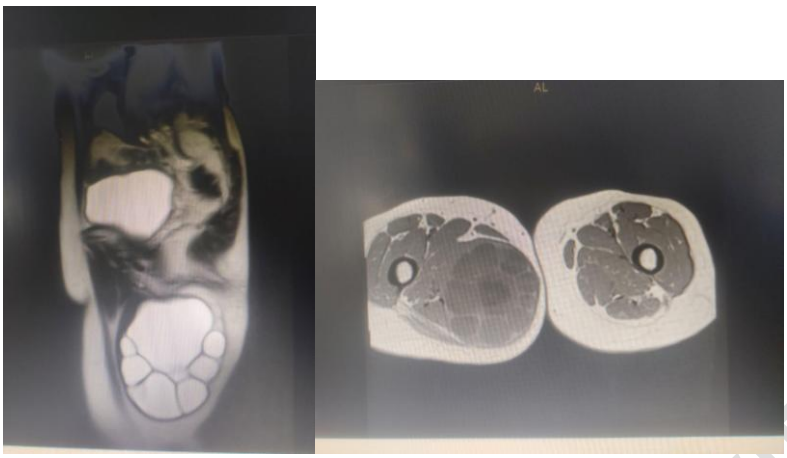

Fig. 4 and 5 MRI pelvis showing right gluteal hydatid cyst with intramuscular extension.

DISCUSSION :

Comment [DCC4]: **This case report should be compared and discussed with other case reports in india and in the world.**

Hydatidosis is a zoonotic larval infection caused by tapeworm Echinococcusgranulosus (Cestodes). It is characterised by the development of hydatid cysts (metacestodes) in the organs of intermediate hosts like humans. This infection develops due to the ingestion of eggs or gravid proglottids by human beings which are excreted in the faeces of definitive hosts like carnivores[2].

Due to this reason, this disease is more commonly seen among people who are involved in farming, animal breeding and having stray dogs in their neighbourhood[3].

An oncospheric larvae is released from the ingested egg into the human intestine which then penetrates through its wall and enters the circulatory system. Liver and Lungs are the most commonly involved organs[1,3,4].

Musculoskeletal involvement is usually seen as a secondary manifestation of a liver or lung primary hydatid cyst. However, it can rarely present as a primary cyst in endemic areas[5-8]. It may involve the chest wall, pectoralis major, sartorius, quadriceps and uncommonly gluteus muscle[5]. This unusual muscular location could be due to high lactic acid in muscles and contraction of muscles which makes it unfavourable for the survival of parasites in muscles[5].

Incidence of muscular hydatid cyst is 0.5 to 5.4%[4]. Although cases of gluteal hydatid cysts were reported earlier, the exact incidence of gluteal muscle involvement is not known clearly[4].

Clinically, a muscular hydatid cyst presents as an asymptomatic, painless, long-standing, slowly progressing mass with normal overlying skin. These signs and symptoms can mimic other probable differentials like lipoma, abscess, hematoma or malignancy; thus making the diagnosis of gluteal hydatid cyst difficult. History of dog contact and those settled in rural or sheep-rearing areas should prompt the concerned diagnosis[5].

Ultrasonography is the first line of imaging of choice having 95% sensitivity. Cystic membrane septa and hydatid sand can be seen on sonography. However, it can be difficult to diagnose solid, mixed and pseudotumorallesions[5].

Ultrasound or CT-guided needle biopsy can be useful in confirming the diagnosis, but there is a risk of cyst rupture and anaphylactic reaction[5]. Magnetic resonance imaging is

considered the gold-standard investigation as it helps in evaluating the exact size of the cyst and its relationship with surrounding tissue and neurovascular structures[5].
The role of serological tests is unsettled due to high false positive results in almost 50% of cases[5].
Surgical excision of the cyst along with preoperative antihelminthic therapy with albendazole and perioperative scolicidal agents like hypertonic saline are useful in preventing local recurrence[3].

Comment [DCC5]: 5- If the article is written in international standard format, its scientific value will be shown a lot.

CONCLUSION:

Diagnosis of primary gluteal hydatid cysts in an isolated form is difficult. However, it must be considered as one of the differentials when associated with other primary locations and endemic area residents.
Surgical removal of the cyst with perioperative antihelminthic therapy is the best treatment to reduce the risk of local recurrence.

REFERENCE:

Comment [DCC6]: The references are old and new references from 2020 and later should be used.

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