Hydrocele of Femoral Hernial Sac—an Extremely Rare Case

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Abstract A previously healthy 40-year-old woman presented with a right groin swelling for the last 2 years. Diagnosed preoperatively as uncomplicated, irreducible epiplocele of right femoral hernia, later per-operatively was diagnosed as hydrocele of femoral hernial sac also known as “femorocele”; ultrasound abdomen and groin demonstrated as a cystic mass right groin with no precise origin. All other basic line investigations within normal limits, except anemia 7 gm %, corrected to 10 gm %, by preoperative transfusions of 2 units of complete fresh blood. After low approach incision, excision of hydrocele sac, and femoral hernia repair were done with approximation of iliopectineal ligament to inguinal ligament, patient was discharged on 5th postoperative day with satisfactory wound healing and uneventful hospitalization.

Keywords Femoral hernia · Hydrocele of femoral hernia sac · Femoral hydrocele · Femorocele · Irreducible femoral hernia

Introduction

Hydrocele of femoral hernial sac is an extremely rare entity. Total six authentic cases have been recorded till date. Bailey [1] reported the first case in 1927; Rives [2] in 1934 had reported two cases of true femoral hydrocele. McCorkle and

Bell had reported three cases in 1941 in the University of California Hospital. Present case is a woman of 40 years age, presenting with a painless cystic irreducible lump right groin for the last 2 years.

Case Report

A 40-year-old woman presented with slowly enlarging painless swelling right groin for the last 2 years, with previous history of partial reducibility but now irreducible with dragging mild pain, on walking for the last 3 months. No any other symptom was found. Systemic, abdominal, rectal, and vaginal examination were unremarkable.

Local Examination

A globular, soft, cystic, non-tender, translucent, fluctuating, non-pulsatile, irreducible swelling, with no cough impulse, bowel sounds over swelling and located below Poupart's ligament, in between pubic tubercle and femoral vessels.

Investigation: within normal limits, except hemoglobin level—7.0 gm/dl, 2 units blood transfusion.

Ultrasonography—right groin—anechoic cystic swelling of size 5.3×4.3×1.6 cm.

A provisional preoperative diagnosis—irreducible epiplocele of right femoral hernia. Other differential diagnosis—cyst of canal of nuck, subcutaneous lipoma.

Under spinal anesthesia, in supine position, exploration with low approach, Thin-walled cystic swelling fluid filled, located medial to femoral vessels and its narrow neck below and behind inguinal ligament seen. On sac opening, amber-colored fluid, omental plug occluding at its neck. The neck of the sac was dissected to its communication with the peritoneal

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Fig. 1 a Cystic swelling just below inguinal ligament

cavity, by releasing thin adhesions with omentum at the neck (Fig. 1a).

The viable omentum was reduced back and neck transfixed and distal sac excised. Femoral canal defect was obliterated without tension by approximating the iliopectineal and inguinal ligament. No indication to use of mesh was there. Postoperative period was uneventful. She was discharged on 5th postoperative day with healthy wound. No recurrence of the hernia has been found to date (Fig. 2a, b).

Discussion

The hydrocele of femoral hernial sac, (“Femorocoele”) is extremely rare.

The femoral canal is located below the inguinal ligament, lateral to the pubic tubercle; bounded by the inguinal ligament anteriorly, pectineal ligament posteriorly, lacunar ligament medially, and the femoral vein laterally. It normally contains a few lymphatics, loose areolar tissue and occasionally a lymph node called Cloquet’s node. Femoral hernia develop as herniations of the peritoneal sac through the femoral ring into the femoral canal, medial to femoral vessels. The femoral

hernia sac have been reported commonly consisting of omentum or small bowel. Fluid collection in femoral hernia sac from peritoneal cavity gravitated to pouch and omental plug at narrow neck. Fluid amber color and sterile in nature, with presence of albumin and fibrinogen.

In old age, the femoral defect increases and femoral hernia is commonly seen in low-weight, elderly females seen in women at 4th to 6th decade. Clinical presentation—painless groin swelling. This never has been diagnosed preoperatively in all cases reported in literature but always only after surgical exploration, as in our case too. The differential diagnosis in consideration is only as irreducible or incarcerated femoral hernia or *cyst of the canal of Nuck*, subcutaneous lipoma or Bartholin’s cyst of labium majora, lymphadenopathic abscess, or arterial and venous aneurysms.

Hydrocele of femoral hernia sac: two varieties, i.e.,

- i. Primary or true hydrocele of femoral hernia sac: fluid trapped in the sac of femoral hernia either due to adhesions or omental plugging at narrow neck of sac, with no evidence of ascites.
- ii. Secondary: fluid collection in sac of femoral hernia from the peritoneal cavity.

The use of mesh is still debatable. Primary tissue repair has been recommended by most studies, particularly if no tension or risk of wound infection.

Conclusions

Hydrocele of femoral hernial sac is an extremely rare entity, presented as a painless soft cystic swelling groin region, in women of 4th to 6th decade. This entity diagnosed postoperatively in all cases reported till date. On exploration, and after excision of sac, transfixation of neck, and its reduction into peritoneal cavity, formal repair with obliteration of femoral canal by approximation

Fig. 2 a Transfixation and **b** approximation

of both ligaments with non-absorbable suture without tension should be encouraged. In patients with no wound infection risk or large hernia defects or older women, the mesh for repairing the femoral hernia canal can be an excellent choice. In our case, though there is no risk of wound infection but a young woman 40 years age with narrow femoral canal defect, easy approximation was done without tension; hence, no mesh was used. Despite the rarity, clinicians should be aware of this condition and exploration of femoral hernia must not be delayed to minimize life-threatening complications and morbidity.

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Authors' Contributions All authors read and approved the final manuscript. Dr. Ravindra Kumar Jain was a major contributor in writing the manuscript and has been involved in the acquisition of data and review of the literature. R.K Jain was involved in drafting the manuscript and revising it critically for important intellectual content. Prof. S. Madhivanan gave final approval of the version to be published.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no competing interests.

Consent Written informed consent was obtained from the patient for publication of this report and accompanying images. A copy of the written consent is available for review by the editor-in-chief of this journal.

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