

A rare case of femoral herniation of female internal genitalia

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Abstract

We report a rare case with herniation of the uterus, fallopian tube, and ovary in a femoral hernia. A female patient was admitted with complain of the painful lump in the left groin. Clinical examination indicated strangulated femoral hernia, which necessitated an emergency surgery. During surgical procedure, the uterine tube, left fallopian tube and left ovary, were observed as the contents of the hernia. The contents were reduced back into the pelvic cavity, and the hernia was repaired. The patient made good recovery postsurgery.

Key words: Fallopian tube, femoral hernia, ovary, uterus

INTRODUCTION

Femoral hernia is a type of groin hernia, where the content protrudes through the femoral ring. Common contents in femoral hernias are, preperitoneal fat and small bowel, in some rare cases, sac containing an appendix, Meckel's diverticulum, ectopic testis, and stomach^[1] are reported. However, a femoral hernia containing the uterus, fallopian tube, and ovary is extremely rare.^[2] Here, we present a case of femoral herniation of female internal genitalia and review the available literature.

CASE REPORT

A 28-year-old married female patient was admitted to the surgical ward with a painful lump in the left groin. She had the swelling in left groin since 1-year, and it had increased in size recently. Although the patient was married for 8 years, she had never conceived and did not have any history of menarche. On general examination, we observed that the patient had normal sized breast and normal external genitalia, however on per-vaginal examination using a vaginoscope, a blind vaginal pouch was observed without any cervix. Clinical examination of the lump revealed a 5 cm × 5 cm tender, irreducible, nonpulsatile mass in the left groin just under the inguinal ligament [Figure 1]. A diagnosis of strangulated femoral hernia was made, which necessitated immediate surgery.

Under general anesthesia, an emergency exploration of the femoral hernia was performed. With the classic inguinal approach, incision was given on the skin and carried down through the subcutaneous layers; the external oblique aponeurosis was opened along with its fibers till the internal inguinal ring was exposed. Following this the floor of the inguinal canal (fascia transversalis) was opened, and the femoral hernia sac was exposed. After exploration of the mass, we confirmed the diagnosis of the femoral hernia. However, we observed herniation of the uterus, left fallopian tube and ovary [Figure 2]. On examination, the contents were observed to be viable and healthy and hence the contents were reduced back into the pelvic cavity. Following this the sac was legated at the level of peritoneal cavity and herniorrhaphy was performed using a polypropylene mesh with inguinal ligament and iliopubic tract interiorly, Cooper ligament posteriorly, femoral sheath laterally, with the iliopubic tract and lacunar ligament medially with nonabsorbable suture. The patient made good recovery postsurgery and was subsequently referred to the gynecology clinic for management of primary infertility.

DISCUSSION

The femoral canal is an elliptically shaped inverted cone measuring approximately 2 cm in length and extending from femoral ring to femoral orifice, located just medial to the femoral vessel and it normally contains lymphatic's,

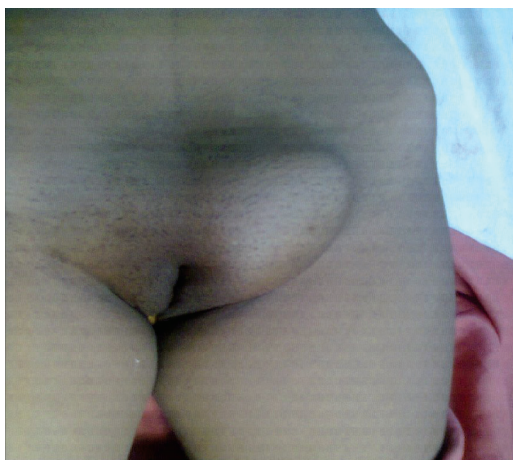


Figure 1: Adult female patient with left sided femoral hernia

some lymph node (of cloquet) and loose adipose tissue. A femoral hernia becomes clinically evident when the normally closed femoral orifice is breached.

Among the groin hernias, femoral hernias account for 2-8% cases, and are mostly observed among adults (40-70 years) and are very rarely reported among children. However, it is 2-5 times more common among adult females.^[3] Elevated intraabdominal pressure during conditions such as pregnancy, constipation and bronchitis can displace the preperitoneal fat through the femoral ring and may pull the peritoneum with it to create a sac.^[4] In addition, females have wider femoral ring and pregnancy causes further stretching and widening of it which makes them more susceptible to develop femoral hernia.^[5] Patients often have a long history of a small inguinal swelling. As femoral hernia do not progress much in size over time, patients usually ignore it, and suddenly the patient present with painful incarcerated inguinal mass. Hence, a general physician should immediately suspect a incarcerated inguinal mass as a femoral hernia, because, likelihood of strangulation of femoral hernia is very high.^[6]

On clinical examination a typical femoral hernia presents as a tender, nonreducible swelling with no cough impulse and is situated below and laterals to the pubic tubercle.^[7] Number of investigations such as, contrast herniography, Doppler ultrasound, computed tomography scan, are performed for diagnosis, however none of them are more accurately significant than physical examinations; hence clinical examination remains the gold standard of preoperative diagnosis.^[8]

Among the three basic approaches (femoral, inguinal and preperitoneal) to explore the femoral hernia, most surgeons use inguinal approach in the presence of incarceration or strangulation. Hence we used the inguinal approach because it provides the excellent exposure of the femoral ring and facilitates the release of the incarceration/or

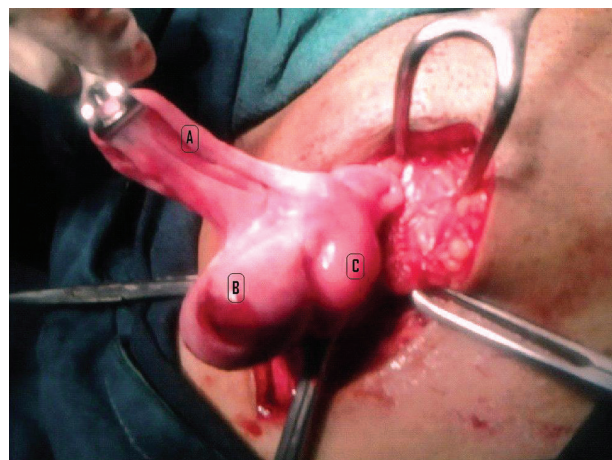


Figure 2: Hernia containing fallopian tube (a), uterus (b), ovary (c)

strangulation hernia and gives the opportunity to resect the gangrenous intestine, if required.

On exploration, femoral hernia usually contains only omentum or may contain a knuckle of bowel. However, herniation of the uterus, fallopian tube, ovary in a femoral hernia is very rare due to its normal anatomical position as it lies at a lower level than the femoral ring.^[9] Interestingly in our case we found all internal female genital organs as the content of the hernia. Even with extensive search, we have not found such reports, indicating the rarity of this condition.

Though the acquired theory proposes the mechanism of femoral hernia formation, this theory is unable to explain our case because the patient in this case was young (28 years) and had no history of pregnancy. In addition she also had her internal genitalia inside the femoral canal with a blind vaginal pouch. From our observations, we suspect that, in this case, the hernia may have a congenital etiology although it is very difficult to explain how the internal genitalia got herniated inside the femoral canal.

We know testis descends from its embryological position to scrotum by contraction of scrotal tail of gubernaculum (pubic, perineal, femoral, superficial inguinal tail). Testis can migrate in any of the five spaces by contraction of a gubernaculum.^[10] Ovary being a homologous organ of testis, it can migrate at those five possible sites, and in extreme cases (as in this case), it may draw the female internal genitalia with it. As the femoral canal is very narrow and poorly expandable, the normal growth of the uterus was not possible, which possibly explains the infertility in our patient.

CONCLUSION

Femoral hernia is more common among adult females, and it may present with strangulation. Diagnosis is

made by clinical examination, and urgent surgical exploration should be performed in such cases. Mostly the hernial content is preperitoneal fat, but rarely like in our case internal female genitalia can also be observed. Such patients may also have a history of primary infertility.

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