

UNUSUAL CONTENTS OF INGUINAL HERNIAL SAC WITH PARAOVARIAN CYST AS CONTENT

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ABSTRACT

BACKGROUND

Unusual contents of inguinal hernia are relatively rare, which include appendix (0.6%), ovaries with fallopian tube (2.9%) and bladder (0.36%). Among those rare contents, our case is regarding the presence left paraovarian cyst with ovary and fallopian tube. The presence of ovaries with fallopian tube is mostly seen in infants and children. But, it is relatively rare in adults. We present a case of left obstructed sliding indirect inguinal hernia containing left ovary with paraovarian cyst and fallopian tube. For this case, paraovarian cystectomy, salpingo-oophorectomy along with herniorrhaphy was done. As surgeons frequently get exposed to inguinal hernia surgeries, seldom they may come across such rare contents. So, they should be careful while dissecting a hernial sac.

KEYWORDS

Paraovarian Cyst, Ovary with Fallopian Tube, Sliding Hernia, Indirect Inguinal Hernia.

HOW TO CITE THIS ARTICLE: Kapu H, Devanandam K. Unusual contents of inguinal hernial sac with paraovarian cyst as content. J. Evid. Based Med. Healthc. 2017; 4(25), 1492-1494. DOI: 10.18410/jebmh/2017/290

BACKGROUND

The incidence of inguinal hernia in females is 1.9%, the ratio of boy to girls being 6:1.¹ The site of presentation being 68.1% on the right side, 23.4% on left and 8.5% bilateral.² The reported incidence of its occurrence in 71% in children under 5 years³ and 30% in adolescents or women in reproductive age group.³ 2.9% exclusively in adults.⁴ So, we present a rare case of left obstructed sliding inguinal hernia with left paraovarian cyst as content along with ovary and fallopian tubes.

CASE REPORT

A 55-year-old female presented with left groin swelling, which is irreducible and associated with pain. The left side groin swelling was present from 2 years, which was previously reducible and painless has become irreducible and painful from one day. She is obese and multiparous with 4 children with no other comorbidities. She underwent tubectomy 30 years back. On examination, there was a single oval swelling of size 7x6 cm², nontender, well-defined smooth swelling in left groin. There was no visible cough impulse or pulsations. It was neither reducible nor compressible. Sonography revealed a soft tissue structure resembling ovarian echogenicity with cyst in the region of left inguinal canal. Exploration confirmed the paraovarian cyst with ovary as contents of hernial sac (Figure 1, Figure

2) along with adhesions and reactionary fluid. Salpingo-oophorectomy along with ovarian cystectomy with herniorrhaphy was done. Postoperative period was uneventful and patient was discharged on 10th postoperative day.



Figure 1. Arrow showing Paraovarian Cyst

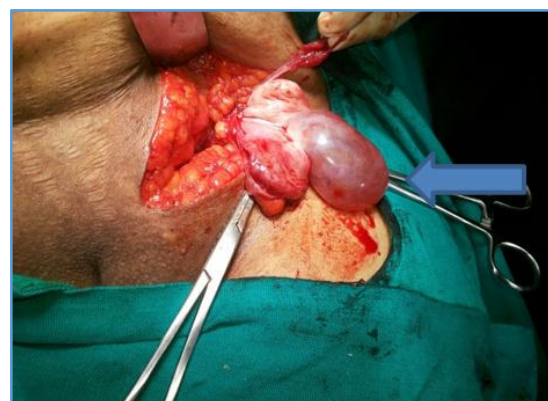


Figure 2. Paraovarian Cyst with Ovary and Fallopian Tube

Financial or Other, Competing Interest: None.
Submission 25-02-2017, Peer Review 07-03-2017,
Acceptance 14-03-2017, Published 27-03-2017.

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DOI: 10.18410/jebmh/2017/290



DISCUSSION

The inguinal canal in the female is not well documented as compared to inguinal canal in males. Normally, different structures pass through it including the round ligament of uterus, a vein, an artery from the uterus that forms a cruciate anastomosis with the labial arteries and extraperitoneal fat.⁴ It is reported in literature that ovarian hernias are extremely rare in premenopausal women and postmenopausal women. On the contrary, most cases of gonadal hernias were reported in paediatric age group associated with other genital tract anomalies.⁵

During embryogenesis, the gubernaculum and broad ligaments suspend the ovary, prevents its descent through the canal of Nuck (process vaginalis peritonei) to the base of labium major.⁶ The canal of nuck is obliterated by the 8th week of foetal life and the ovary is then suspended between the cornu of uterus and the internal ring. If it remains patent, the ovary and the fallopian tube may be forced through the canal to a congenital hernial sac. When ovary and fallopian tube form contents of inguinal hernial sac, they are often associated with anomalies in the development of genital tract such as vaginal atresia, bicornuate uterus and renal anomalies.^{3,4,6,7} These patients are treated with reduction of contents provided. There is no ovarian or tubal abnormality. The blood supply is not impaired and there is no evidence of salpingitis.^{4,6} Reduction of contents is followed by high ligation of hernial sac, closure of internal ring and reinforcement of posterior wall with a mesh in patients older than 20 years of age.^{3,4,6} In our case, because of presence of reactionary fluid we didn't place the mesh. The presentation of paraovarian cyst as an inguinolabial swelling, however, is extremely rare and has been reported only once before in English literature.⁸

T. Okada et al suggested a few hypothesis as to mechanism by which this may occur.⁹ One of these hypotheses speculates that weakness of broad ligaments or ovarian suspensory ligaments in high parity patients can contribute to ovarian herniation into the hernial ring. This can be augmented by high intraabdominal pressure from frequent valsalva manoeuvre in patients with chronic cough or frequent heavy weightlifting.⁹ These might be mechanism in our patient. In contrast, case reports in fertile female women with entrapped adnexa has been associated with abnormalities of fallopian tube, such as paratubal cysts and haemorrhagic cysts of ovary, which cause weighted descent of the organ and predisposition to entrapment.^{10,11}

Ultrasound can be used for diagnosing the contents of sac. However, when ultrasound results remain ambiguous and there is concern for entrapped organs, CT scan can be performed to provide differential diagnosis and aid in proper counselling, consultation and timely decision making for urgent surgical management in order to avoid organ damage. Despite the efforts made to diagnose the contents of inguinal hernia prior to surgery, most of them are made intraoperatively.

Although, ovarian cyst is not commonly encountered by surgeons, a high index of suspicion is required in order to

avoid any delay in diagnosis and treatment. It was reported that about 4-37% of female inguinal hernias, which have been found intraoperatively present with reducible ovaries, ovarian torsion and infarction have been encountered in 2-33%. Of these patients, which necessitates treating all cases even when asymptomatic.¹²

Ovarian cyst can be dealt with effectively with the help of laparoscopy, particularly if the cyst is benign with concomitant repair of inguinal hernia if the diagnosis is made preoperatively.¹³ This was not applicable to our patient as our preoperative diagnosis was displayed obstructed sliding inguinal hernia.

CONCLUSION

In most cases, the contents of hernial sac can be detected intraoperatively. Although, considered to be a very rare entity, the probability of paraovarian cyst should be kept in mind in female patients presenting with an irreducible swelling in inguinal or femoral repair in order to avoid serious complications. Whenever suspected, it must be treated as surgical emergency.

REFERENCES

- [1] Read RC, White JJ. Inguinal herniation 1777-1977. *Am J Surg* 1978;136(6):651-657.
- [2] Devlin HB. Inguinal hernia in babies and children. In: Dudley H, Walter P, Carter D, eds. *Rob & Smith operative surgery*. 4th edn. Oxford: Butterworth's 1983:449-454.
- [3] van Heesewijk HP, Smith FW, Heitbrink MA, et al. Herniation of an ovarian cyst through the inguinal canal: diagnosis with CT. *American Journal of Roentgenology* 1990;154(1):202-203.
- [4] Gurer A, Ozdogan M, Ozlem N, et al. Uncommon content in groin hernia sac. *Hernia* 2006;10(2):152-155.
- [5] Golash V, Cummins RS. Ovulating ovary in an inguinal hernia. *Surgeon* 2005;3(1):48.
- [6] Ballas K, Kontoulis TH, Skouras CH, et al. Unusual findings in inguinal hernia surgery: report of 6 rare cases. *Hippokratik* 2009;13(3):169-171.
- [7] Mayer V, Templeton FG. Inguinal ectopia of the ovary & fallopian tube. Review of the literature and report of the case of an Infant. *Archives of Surgery* 1941;43(3):397-408.
- [8] Bradshaw KD, Carr BR. Ovarian and tubal inguinal hernia. *Obstetrics Gynecology* 1986;68(3 Suppl):50S-52S.
- [9] Okada T, Sasaki S, Honda S, et al. Irreducible indirect inguinal hernia containing uterus, ovaries, and fallopian tubes. *Hernia* 2012;16(4):471-473.
- [10] Ozkan OV, Semerci E, Aslan E, et al. A right sliding indirect inguinal hernia containing paraovarian cyst, fallopian tube, and ovary: a case report. *Archives of Gynecology and Obstetrics* 2009;279(6):897-899.
- [11] Malik KA, Al Shehhi RM, Al Qadhi H, et al. Ovarian hernia: a rarity. *Sultan Qaboos University Medical Journal* 2012;12(2):225-227.

[12] Al Omari W, Hashimi H, Al Bassam MH. Inguinal uterus, fallopian tube, and ovary associated with adult Mayer-Rokitansky-Kuster-Hauser syndrome. *Fertil Steril* 2011;95(3):1119.e1-4.

[13] Machado NO, Machado LS, Al Ghafri W. Laparoscopic excision of a large ovarian cyst herniating into the inguinal canal: a rare presentation. *Surg Laparosc Endosc Percutan Tech* 2011;21(4):e215-218.