

# Case Report of Indirect Inguinal Herniation of Ovary in a Healthy Adult and Literature Review

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## Background

Herniation of the ovary within the inguinal canal is well-described in infants<sup>1</sup> or in association with genital abnormalities<sup>2</sup>, however it is considerably less common in phenotypically normal adult females. We describe an unusual case of ovarian herniation via an indirect inguinal hernia in a healthy adult female, and present a brief literature review to provide some context for this rare diagnostic consideration.

## Methods

A literature review was undertaken via the MEDLINE database (as presented in Figure 1). Initial search for *ovary inguinal hernia* elicited 183 results, which were further screened by excluding articles with *pediatric, paediatric and infant* in the title to 87 articles. All abstracts and where required, full articles, were reviewed to select articles relevant to the clinical case described. Studies were selected that met the following inclusion criteria: presence of ovarian inguinal herniation, post-pubertal age and no congenital urogenital abnormalities. The clinical details of the relevant 14 articles are summarized in Figure 2.

## Case Report

A 26 year old nullip presented to Emergency with a 2 week history of reducible right groin mass with straining and corresponding right lower quadrant pain. She reported an increased amount of heavy lifting in her line of work in the several weeks prior to the onset of pain. She was of a normal BMI and her prior medical history was unremarkable, aside from previous Chlamydia STI (with negative test of cure) and progesterone-releasing IUD in situ with resultant amenorrhea. Ultrasound showed a perfused right ovary and associated 4.3cm cyst adjacent to and slightly extending into the right deep inguinal ring, with thickening and hypervascularity of the ovarian consistent with inflammation. On examination, the groin mass was reduced and abdomen was non-tender; the patients right lower quadrant pain had abated with reduction of the groin mass. Inflammatory markers, pregnancy test, routine bloods and endocervical/high vaginal swabs were all negative. The patient was informed that these sonographic findings likely represent a reduced ovarian herniation, and the patient opted for conservative management, cyst surveillance and consideration of elective repair.

## Results

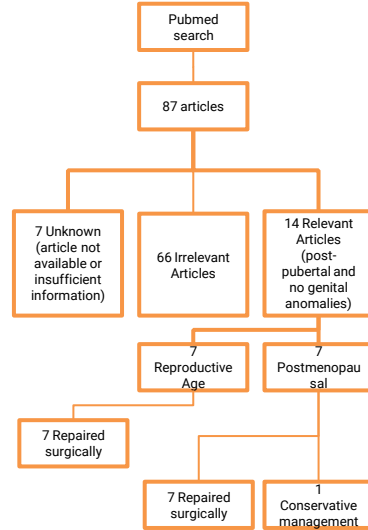


Figure 1: Summary of Systematic Literature Review

## Conclusion

The described clinical case and systematic literature review demonstrate that, although very rare, ovarian involvement in an inguinal hernia sac is possible. The viability of the affected ovary in 11 of the 14 cases described in the literature further highlights the reversibility of this condition if managed expeditiously. Although this diagnosis is more likely in an infant population or in the presence of congenital abnormalities, it should not be discounted in the setting of a healthy adult female with lower abdominal pain.

## References

1. Park HR, Park SB, Lee ES, Park HJ. [Sonographic evaluation of inguinal lesions](#). Clin Imaging. 2016 Sep-Oct;40(5):949-55. doi: 10.1016/j.clinimag.2016.04.017. Epub 2016 May 3. Review. Erratum in: Clin Imaging. 2017 Mar - Apr;42:249. PubMed PMID: 27209238.
2. Webb JB, Fallon SC, Lopez ME, Boswell HB, Dietrich JE, Brandt ML. [The management of an ectopic ovary in the inguinal canal: literature review and discussion](#). Pediatr Surg Int. 2014 Oct;30(10):1075-8. doi: 10.1007/s00383-014-3582-y. Epub 2014 Aug 6. Review.

Patient Age	Ovary Viable (Y/N)	Treatment
16	Y	Surgical hernia repair
23	Y	Surgical hernia repair
25	Y	Surgical hernia repair
28	Y (corpus luteum)	Surgical ovarian cystectomy and hernia repair
29	Y	Surgical hernia repair
31	Y (hemorrhagic corpus luteum)	Surgical ovarian cystectomy and hernia repair
44	N	Surgical oophorectomy and hernia repair
54	N	Surgical oophorectomy and hernia repair
61	Y	Asymptomatic, conservative management
80	Y	Surgical hernia repair
87	Y (with uterus and fallopian tube)	Surgical hernia repair
89	N	Surgical oophorectomy + hernia repair
50-65 (not specified)	Y	Surgical hernia repair
50-65 (not specified)	Y	Surgical hernia repair

Figure 2: Clinical Details of Relevant Articles in Literature