

HJOG 2022, 21 (3), 151-154 | DOI: 10.33574/HJOG.0512

# Laparoscopic treatment of a complex adnexal mass of the retroperitoneal space: A case report

Theodore Liakakos<sup>1</sup>, Katerina Papakonstantinou<sup>1</sup>, Michail Panagiotopoulos<sup>2</sup>,  
Dimitrios Papageorgiou<sup>1,2</sup>

<sup>1</sup>Department of Gynecology, Athens Naval and Veterans Hospital, Greece

<sup>2</sup>1<sup>st</sup> Department of Obstetrics and Gynecology, Alexandra Hospital, National and Kapodistrian University of Athens, Greece

---

## Corresponding Author

Dimitrios Papageorgiou, Department of Gynecology, Athens Naval and Veterans Hospital, 70, Deinokratous str, 11521 Athens, Greece. Tel.: +30 210 7261000, e-mail: mitsakos85@hotmail.com, ORCID: 0000-0003-0160-7755

## Abstract

Complex adnexal cystic masses in women of reproductive age should be carefully evaluated before the final diagnosis is set. Adnexal cystic masses are not necessary malignant. On the contrary, they usually refer to a benign and not cancerous pathology. A certain benign pathology behind adnexal masses is endometriosis. Endometriosis occurs in 10-15% of women of reproductive age and presents great diversity both in the way it manifests and in its location. We report a case of a multiparous woman of reproductive age that was referred to our clinic due to abdominal and back pain. The imaging examinations revealed a cystic mass of the left parametrium that was laparoscopically removed. The histopathology set the diagnosis of endometrioma. The aim of our work is to highlight the endometrioma of the retroperitoneal space as part of the differential diagnosis of the cystic masses of the parametrium.

**Key words:** Endometriosis, adnexal mass, endometrioma, exploratory laparoscopy

## Introduction

Adnexal masses have a wide etiology. Both gynecological and non-gynecological pathologies may be the reason of cystic adnexal masses. Ectopic pregnancy should be excluded in women of reproductive age. In patients reporting abdominal and pelvic pain, ovarian cancer must be ruled out and Ca-125 serum levels should be measured in order to exclude different possible pathological entities. In women of reproductive age, endometriomas should

also be part of the differential diagnosis of adnexal masses<sup>1</sup>. Endometriosis is a common benign entity affecting 10-15% of females during the reproductive age and presents great diversity both in the way it manifests and in its location<sup>2,3</sup>.

## Case Report

We report the case of a 45-year-old premenopausal multiparous Caucasian female, with a free medical

history, who was referred to the surgical clinic of our hospital, due to left abdominal pain and low back pain.

During clinical examination signs of inflammation or bowel obstruction were absent. Mild pain was revealed at deep palpation of the left lower quadrant of the abdomen. Her temperature was normal and the patient did not report any other symptoms.

On Computed Tomography (CT) of the abdomen, a cystic-textured thin-walled formation was found in the left parametrial space with a maximum diameter of about 6cm, with a diaphragm, which presents a mild outline after intravenous administration of a contrast agent. The cystic mass was expanding at the left parametrium space and was exerting pressure on the left ureter resulting in dilatation of the left renal pelvis and the upper part of the left ureter. Abdominal Magnetic Resonance Imaging (MRI) revealed a lesion with predominantly cystic texture and hemorrhagic content, measuring 6x6x7cm, at the anatomical position of the left ovary. The lesion presented a thickened wall with pathological enrichment after intravenous administration of paramagnetic contrast material and a reinforced diaphragm, which divided the lesion into two separate parts. These imaging findings were suspicious of possible development of primary cancerous pathology. The tumor markers were negative and the rest of the laboratory examinations had values within normal range.

Following the above, the patient was referred to the gynecology department of our hospital and an exploratory laparoscopy was conducted. Exploratory laparoscopy revealed the presence of a large endometrial cyst of the left ovary, which extended retroperitoneally, as well as a few foci of endometriosis at the pouch of Douglas. The endometrioma was excised along with the left ovary, laparoscopically, after its detachment from the left ureter and the mesosigmoid and was sent for histologic examination. Endometriotic lesions of the pouch of Douglas

were burned away. Histological analysis confirmed the diagnosis of endometriosis.

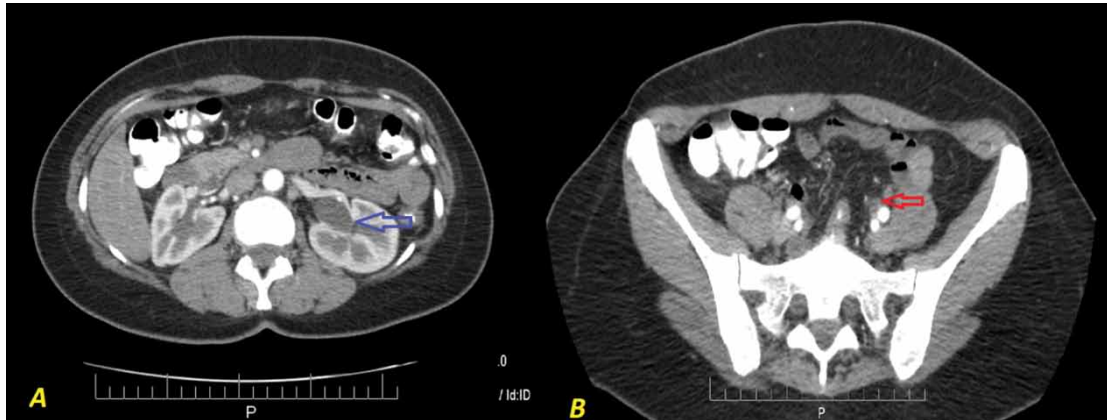
The patient was discharged from hospital the day after surgery, without any postoperative complications and 24 months later she remains asymptomatic.

### Discussion

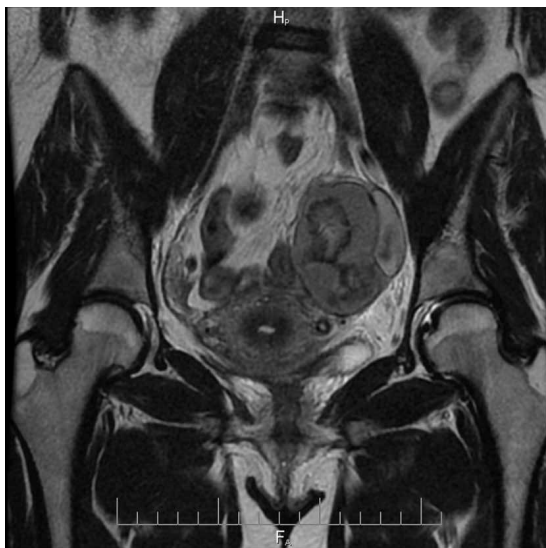
Adnexal masses are common in women of all ages and have a variety of etiologies. Ovarian masses are the most common type, appearing in up to 35 % of premenopausal women<sup>4</sup>. These may be asymptomatic or present with a number of symptoms that vary widely depending on the underlying etiology. In our case, left abdominal pain and low back pain were the reason that the patient sought out medical attention.

A diagnostic evaluation is required in patients with an adnexal mass, which includes a thorough medical history (menstrual history, onset and type of symptoms, pain characteristics, history of infertility, cancer risk factors), physical and pelvic examination, laboratory tests and imaging studies. Transvaginal ultrasound (TVUS) should be the first-line imaging study for evaluating an adnexal mass. In our case, the TVUS was omitted as the patient underwent a CT and MRI of the abdomen as per the recommendations of the attending surgeons and she was only later referred to the gynecology department (Figure 1, Figure 2). The imaging results revealed a complex mass, suspicious for malignancy, even though serum tumor markers, including CA-125, were within normal range. Furthermore, they revealed that the mass was expanding at the left parametrium space, exerting pressure on the left ureter resulting in dilatation of the left renal pelvis and the upper part of the left ureter, which could explain the low back pain of the patient.

A presumptive diagnosis of the etiology of an adnexal mass can often be made based on medical history, clinical findings, serum tumor markers and the mass characteristics in the imaging studies. However, a surgical approach is necessary for a de-



**Figure 1.** CT images showing A) left renal pelvis dilatation (blue arrow) and B) left ureter dilatation (red arrow).



**Figure 2.** T1 weighted coronal MRI image showing a cystic mass with hemorrhagic content at the anatomical position of left ovary. A diaphragm divides the cyst into two parts.

definitive diagnosis of the etiology of an adnexal mass based on the characteristic histologic findings. Our patient underwent diagnostic laparoscopy due to her clinical symptoms and the suspicious imaging findings. This revealed an endometrioma of the left ovary, which extended retroperitoneally.

Endometriosis, a common but complex pathologi-

cal entity, is defined as endometrial glands and stroma that occur outside the uterine cavity. Endometriomas may present with a wide range of symptoms depending its locations and size and laparoscopy has been considered to be the gold standard evaluating and diagnosing endometriosis<sup>2,3</sup>. Patients typically present during their reproductive years with symptoms, most commonly pelvic pain (including dysmenorrhea and dyspareunia), infertility, or an ovarian mass<sup>5,6</sup>. Endometriomas are often densely adherent to close structures (peritoneum, fallopian tubes, uterus, and bowel). In our case, even though the endometrioma was relatively small (approximately 6 cm in diameter), it extended retroperitoneally causing pain symptoms due to pressure on the left ureter. In cases like that, laparoscopy is often challenging as it requires careful detachment from the adjacent ureter and the mesosigmoid.

### Conclusion

Endometriosis should be part of the differential diagnosis in cases of patients with pelvic and retroperitoneal masses, especially in patients of reproductive age. Surgical treatment is often challenging and requires deep anatomy knowledge and surgical experience.

### Disclosure of conflicts of interest

The authors report that they have no conflicts of interest to disclose.

### Funding sources

The authors did not receive any type of funding for the present work.

### Compliance with ethical standards

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all participants included in this study.

### Author contributions

DP, KP and MP drafted the manuscript. TL supervised the project and revised the manuscript.

### References

1. Biggs WS, Marks ST. Diagnosis and Management of Adnexal Masses. *Am Fam Physician*. 2016 Apr 15;93(8):676-81. PMID: 27175840.
2. Papageorgiou D, Ivros N, Kalles V, Papapanagiotou IK, Papakonstantinou K. Hemorrhagic hydrocele in the canal of Nuck: A rare case of endometriosis. *Eur J Obstet Gynecol Reprod Biol*. 2021 Sep;264:382-383. doi: 10.1016/j.ejogrb.2021.07.011. Epub 2021 Jul 17. PMID: 34304934.
3. Papageorgiou D, Prantalos P, Tzavoulis D, Sgouros SN, Ivros N, Papakonstantinou K. Massive hemorrhagic ascites associated with extensive severe peritoneal endometriosis: A rare case report. *Int J Gynaecol Obstet*. 2022 Feb 19. doi: 10.1002/ijgo.14148. Epub ahead of print. PMID: 35182071.
4. Pavlik EJ, Ueland FR, Miller RW, Ubellacker JM, DeSimone CP, Elder J, Hoff J, Baldwin L, Kryscio RJ, van Nagell JR Jr. Frequency and disposition of ovarian abnormalities followed with serial transvaginal ultrasonography. *Obstet Gynecol*. 2013 Aug;122(2 Pt 1):210-217. doi: 10.1097/AOG.0b013e318298def5. PMID: 23969786.
5. Vercellini P, Viganò P, Somigliana E, Fedele L. Endometriosis: pathogenesis and treatment. *Nat Rev Endocrinol*. 2014 May;10(5):261-75. doi: 10.1038/nrendo.2013.255. Epub 2013 Dec 24. PMID: 24366116.
6. Sinaii N, Plumb K, Cotton L, Lambert A, Kennedy S, Zondervan K, Stratton P. Differences in characteristics among 1,000 women with endometriosis based on extent of disease. *Fertil Steril*. 2008 Mar;89(3):538-45. doi: 10.1016/j.fertnstert.2007.03.069. Epub 2007 May 11. PMID: 17498711; PMCID: PMC2939902.

*Received 09-05-22*

*Revised 17-06-22*

*Accepted 21-06-22*