

Laparoscopic Surgery for Bilateral Multiple Calcified Ovarian Fibromas: A Case Report

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Abstract

Ovarian fibromas generally occurs in elderly women but also can be seen rarely in reproductive aged young patients. Management of patients at reproductive ages with ovarian mass like ovarian fibromas, which can occur in young women, is a challenging subject. Although their benign feature, most of the surgical procedure includes laparotomy and oophorectomy. However laparoscopic surgery could be an option for the diagnosis and treatment. We report a case of multiple, bilateral, calcified fibromas in an infertile 24 year old patient, treated successfully with laparoscopic ovarian sparing and complete resection of the fibromas.

There is no common consensus on the treatment of fibromas especially in reproductive-aged women. Particularly in cases like we presented, fertility-sparing approaches like laparoscopic minimally invasive surgical techniques can be the appropriate treatment choice.

Keywords: Ovarian fibromas; Fertility preservation; Laparoscopy; Ovarian sparing surgery

Introduction

Ovarian fibromas are benign sex cord-stromal tumors with an incidence of 4% among benign ovarian tumours. There are few reported cases encountered in the first three decades besides they are often seen in premenopausal and postmenopausal women (4th and 5th decades) [1]. They are usually unilateral and 70% of them are seen in the left ovary [2]. The fibromas at younger ages or the recurrent fibromas with bilateral ovarian involvement have been reported and 75% of these patients were associated with Gorlin syndrome as known as nevoid basal cell carcinoma [3,4]. Some of them which are complicated with congenital anomalies or pleural effusion respectively comply to Sotos and Meigs' syndrome and these have been reported as case reports [5,6]. Fibromas are often asymptomatic tumors. Thus, they can be detected incidentally during routine gynecological examination. The patients with large fibromas can be manifested with nonspecific pressure symptoms such as abdominal pain and distention [2]. The fibromas which might rarely present with massive calcification can be detected incidentally on plain pelvic radiographs [7].

The treatment of the fibromas is surgical removal of tumor and the exact diagnosis is done with histopathologic examination of the specimen. The type of surgical method, whether laparoscopy or open surgery, has not been acknowledged adequately yet. The laparoscopic approach can be challenging especially for large, bilateral, multiple and calcified fibromas. We aimed to discuss about fertility-sparing laparoscopic surgical approach for a case of bilateral, multiple ovarian calcified fibromas in accordance with the current literature. As in our case, bilateral, multiple and massive calcified ovarian fibromas were diagnosed incidentally in direct radiography which was performed during hysterosalpingography for an infertile asymptomatic patient.

Case Report

Our patient was 24-year-old female who had primary infertility for 4 years. She was referred from another medical center after some evaluations have been carried out about infertility. Basal FSH, LH, E2 levels, male factor assessments and semen analysis results were in normal range. Hysterosalpingography was performed to evaluate the tubo-peritoneal factor and pelvic calcified mass recognised and as a

result of a calcified pelvic mass on direct radiography (Figure 1), the patient was referred to our clinic for further evaluation and treatment.

The patient's medical history was unremarkable and she was asymptomatic excluding oligomenorrhea and hypomenorrhea. Firstly, the pelvic examination was performed and fullness revealed in Douglas and bilateral adnexal areas secondary to the mobile solid lesions. Also, the mobile and solid masses were palpated under the umbilicus in abdominal examination. There weren't any other pathological findings in physical examination. An anteverted and natural sized uterus was observed in ultrasonography. The solid lesions that were approximately about 6-7 cm in diameter were detected with manifested acoustic shadowing as a result of massive calcification on bilateral adnexal areas. The ovarian tissue could not be evaluated separately. Bilateral adnexal solid lesions with defined borders and including calcified areas were observed independent from the uterus and the largest diameters of them detected with pelvic MRI were about 7 cm on the left side (Figure 2) and 5 cm on the right side (Figure 3). There was no free fluid in the abdomen. The assessments of CA 125, CA 15-3, CA 19-9, CEA, AFP, inhibin and BHCG were in normal ranges. Anti-müllerian hormone (AMH) value was 1.3 ng/ml.

Surgery was planned for the diagnosis and the treatment of bilateral adnexal masses. The possible risks of malignancy and surgical alternatives were explained to the patient. She was informed about the ovarian reserve tests and the actual ovarian reserve of herself. The infertile couple who had a request for pregnancy and they demanded the fertility-sparing surgery. The informed consents of the couple were taken accordingly.

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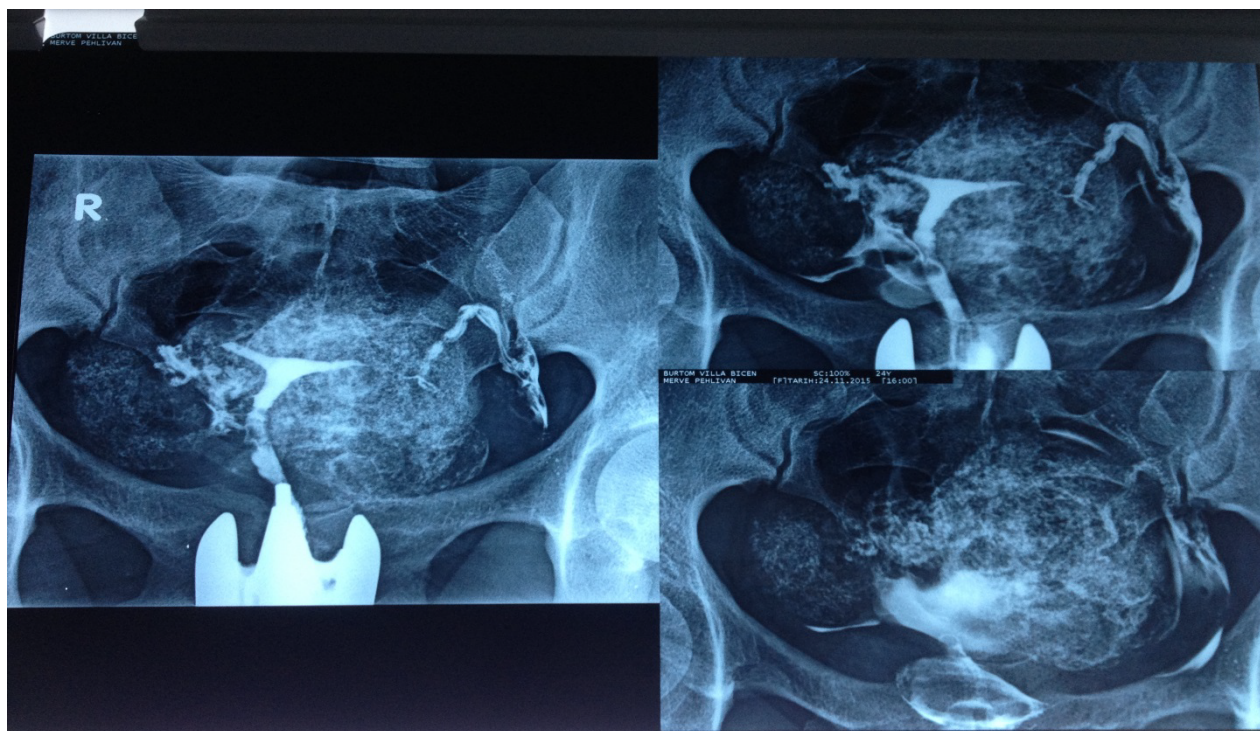
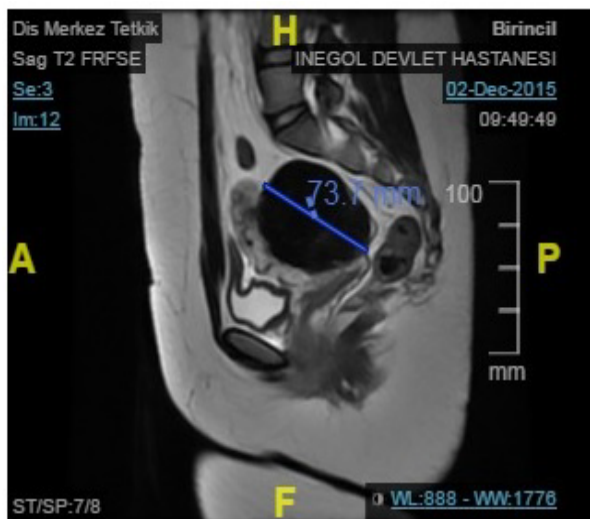
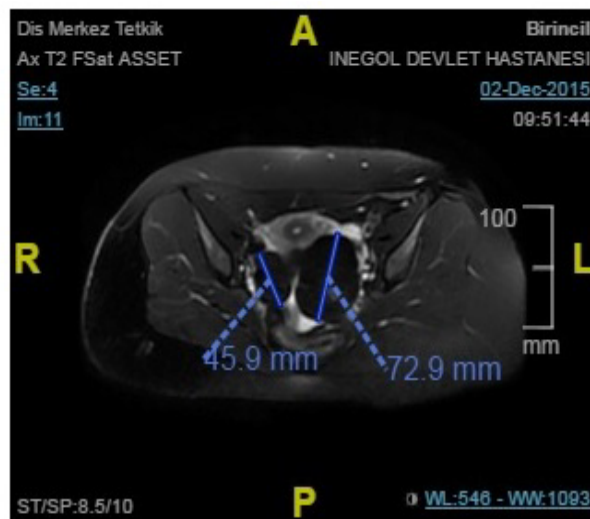


Figure 1: Hysterosalpingography calcified pelvic mass.



A



B

Figure 2: Magnetic resonance images. A) A T2-weighted image shows a calcified solid ovarian mass in right ovary. B) A fat-suppression image reveals there is no suppression in lesions, pure calcific more than iliac bones.

Laparoscopy was performed for the excision of bilateral multiple ovarian masses. After the pneumoperitoneum that was created with umbilical verres needle, a 10 mm umbilical trocar was replaced and afterwards, two 5 mm pelvic trocars were replaced under laparoscopic view.

There weren't any adhesions in the pelvic area. Bilateral ovaries were visualized and both ovaries contained multilobulated, hard, calcified

and mobile masses. The sharp dissection on the ovarian surface was applied firstly and, after finding the cleavage, the traction and counter traction were carried out about the gentle stripping technique for the masses. Totally 4 (four) solid calcified lesions from the left ovary and 8 (eight) from the right ovary were excised and the largest mass was about 7 cm (Figure 4). None of the energy modalities were used during the surgery to reduce the risk of damage for the ovarian reserve. The bleeding control was provided by primary suture of the ovaries. All



Figure 3: Macroscopic pathological images.

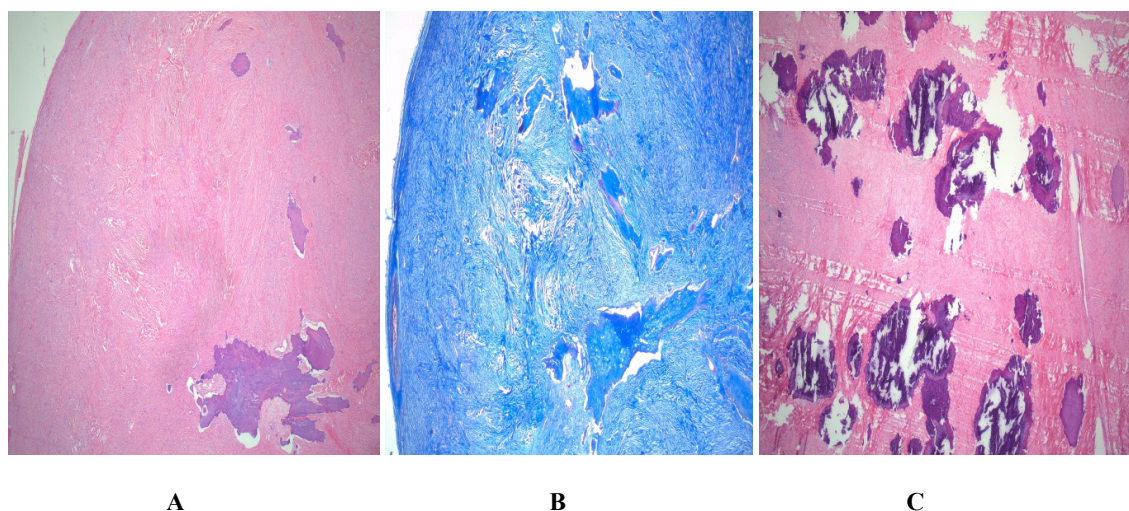


Figure 4: Histopathological images. A) Calcified fibroma (H&E X25). B) Diffuse collagenous staining in the tumor (Masson Trichrome X25). C) Fibroma with extensive calcified areas (H&E X25).

of the excised solid lesions were taken into an endobag. Then, the 5 mm trocar incision entry on the left pelvic region was expanded minimally and the endobag was exteriorized outside the abdomen. Masses were disintegrated in the bag and then they were taken out. The operation was completed by preserving ovaries in accordance with the fertility sparing procedure.

Pathology results were reported as calcified ovarian fibromas (Figure 4). Afterwards, the examinations and tests were carried out for syndromes such as which can accompany to fibromas like Gorlin, Sotos or Meigs' syndrome. No significant finding was obtained.

Patient's spontaneous menstruation occurred on the 25th

postoperative day. During this control, bilateral ovarian sizes and vascularity were evaluated in ultrasound examination and found normal. The antral follicle was counted as 5 and 6 respectively for each ovary.

Discussion

Ovarian fibromas are the most common neoplasms among benign ovarian sex cord stromal tumours with an incidence of 4%. They are usually unilateral and a few of them contain calcification. The fibromas are generally non-functional but can become hormonal active.

They may be associated with Meigs', Sotos or Gorlin syndromes, which are rare three clinical syndromes [4-6]. The fibromas related with these syndromes can occur in bilateral form and contain calcification in the earlier decades of reproductive age. Concomitant ascites and pleural effusion can be detected about 40-50% of cases with the ovarian fibroma above the diameter about 5 cm. These cases are clinically identified as Meigs' syndrome. Gorlin syndrome is consisted of multiple tissue calcification and nevoid basal cell carcinoma. Approximately 75% of the ovarian fibromas occur in bilateral, calcified and multinodular forms in patients with Gorlin syndrome [8]. Sotos syndrome is another syndrome associated with ovarian fibromas and characterized by congenital anomalies such as microcephaly or dolichocephaly.

Our patient was young and she had multiple, bilateral calcified ovarian fibromas. Therefore, she was examined for the presence of any of these syndromes, especially for the Gorlin syndrome. However, there were no pathological findings consistent with these syndromes neither in the preoperative or peroperative nor in postoperative evaluation. Thus, they cannot be associated with any of these mentioned syndromes.

In another perspective, it is very important to discriminate the ovarian solid lesions from ovarian malignancies in the clinical practice. The evaluation of the content, nature, nodularity, possible papillary projections, and vascularization is difficult for the calcified lesions and as a result of this, CT or MRI has come to the forefront.

The suspicion for malignancy is increased in conditions such as large, bilateral and solid lesions. Indeed, it was observed that in many case reports in the literature, premenarchal patients underwent radical procedures such as oophorectomy for benign fibromas [9,10]. Besides, a small number of cases reported with ovarian sparing surgery were applied with laparoscopic approach for fibromas [11].

Histopathological verification should be done for these lesions and for excisional procedures minimally invasive surgical approaches performed with laparoscopy are good alternatives when the fertility desires of young patients are considered.

Conclusion

In our case, the patient's age and fertility desire were taken into

consideration. Normal levels of tumour markers, the absence of ascites and the occurrence of the lesions with a smooth border and homogeneous content in MRI led us to a preliminary diagnosis of benign ovarian pathologies. The patient's request and detailed consent were obtained and ovarian sparing surgery was planned. The laparoscopic procedure was preferred as a surgical technique for mass excision. The morcellation of the masses in the abdomen was avoided in order to prevent iatrogenic intra-abdominal dissemination by considering the possibility of potential malignancy. The lesions were put inside appropriate endobag and, intra-abdominal dissemination was prevented. Coagulation was not performed in any step of the surgery. Successful complete surgery was performed with laparoscopy.

When the different clinical presentations were considered, it has been observed that there wasn't any agreed consensus for approaching to fibromas especially in reproductive-aged women. Particularly in cases like ours, whether or not the fibromas was associated with the syndromes, the fertility-sparing approach with laparoscopic minimally invasive surgical techniques can be beneficial and should be kept in mind because benign features of the fibromas.

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