Laparoscopic Management of Primary Ovarian Leimyoma in a Patient with Pelvic Kidney

Ulun ULUĞ[1,2], Ali İhsan GÖNENÇ[2], Özlem DÜLGER[1,2], Latif KÜPELİOĞLU[1,2], Güray KILIÇ[3]

Istanbul, Turkey

ABSTRACT

Leiomyoma is one of the rarest solid tumours of the ovary. We report a case of a 35 years old woman suffering from irregular menstruel periods and solid unilateral ovarian mass managed by laparoscopic removal. Medical history of the patient is remarkable because of coexisting pelvic kidney and a history of infertility necessiating invitro fertilization treatment including gonadotropin stimulation

Keywords: Ovarian leimyoma, Laparoscopy, Pelvic kidney

Gynecol Obstet Reprod Med 2017;23(1):48-50

Introduction

Leiomyoma is one of the rarest solid tumours of the ovary (1). It can be detected in women between 16 to 65 years, but usually reported in reproductive period of women (85%) (2). Up to date less than 80 cases of primary ovarian leimyoma (POL) have been reported which accounts less than 1% of all ovarian tumours (3). The mechanism of leimyoma development in the ovary is not clear and several factors are hypothesized. In the majority of cases POL was found incidentally also including autopsy findings (3,4). Because of characteristic solid appearance the differential diagnosis renders a wide spectrum of masses involving ovary and always possibly of a malignancy.

Here in we report a case of a 35 years old woman suffering from irregular menstruel periods and solid unilateral ovarian mass managed by laparoscopic removal.

[1] *Istanbul Kemerburgaz University Medical School, Istanbul*
[2] *Bahçelievler Medical Park Hospital, Istanbul*
[3] *Ekin Pathology Lab, Istanbul*

Address of Correspondence: *Ulun Uluğ*
Istanbul Kemerburgaz University
Medical School Istanbul, Turkey
uulug@hotmail.com

Submitted for Publication: *28.04.2016*
Accepted for Publication: *23.05.2016*

Access this article online	
Quick Response Code:	Website: www.gorm.com.tr
	DOI:10.21613/GORM.2016.118

How to cite this article: *Uluğ U. Gönenç Aİ. Dülger Ö. Küpelioğlu L. Kılıç G. Laparoscopic Management of Primary Ovarian Leimyoma in a Patient with Pelvic Kidney. Gynecol Obstet Reprod Med 2017;23(1):48-50*

Case Report

The patient had infertility history due to male factor and eventually conceived 2 times by invitro fertilization (IVF) treatment in a fresh cycle and subsequently in a frozen cycle having two healthy children. Both deliveries were caesarean section 8 and 5 years ago. She had irreguler menses as oligomenorrhea for the last 3 months. The first physican she was seen found unremarkable gynecologic examination findings and ordered hormonal profile (FSH, LH, Estradiol, TSH, Prolactin and DHEA-SO4) which were all within the normal limits. The second physician she admitted detected right ovarian solid mass with the dimensions of 5 cm to 5cm. Pelvic magnetic resonance imaging (MRI) also revealed a right sided solid ovarian mass suggesting thecoma of ovary with possibility of ovarian malignacy. The patient was referred to us and during pelvic examination right adnexial mass was detected. Transvaginal ultrasound revealed an inmobile solid mass adjacent to dorsal side of right ovary with free fluid surrounding the adnexa. Also left sided pelvic kidney was detected as was seen in MRI. Uterus, left ovary and other pelvic structures were found normal. General physical examination of the patient was completely normal no signs of hyperandrogenemia. There was no pleural effusion osculated or scanned. Complete blood count was normal. Tumor markers CA 125 was slightly elevated 49 U/mL, CA 19.9, αFP and CEA were within the normal limits.

The patient was scheduled for diagnostic laparoscopy and in case of a possible laparotomy. During endoscopic inspection of abdominal cavity, a normal appearing uterus, left tuba and left ovary were found. Left iliac fossa was elevated because of the pelvic kidney. Free fluid about 20 mL was aspirated from douglas pouch. A yellowish about 4 cm diameter solid mass rising from dorsal side of the right ovary was detected (Figure I). The mass was firmly attached to the periph-

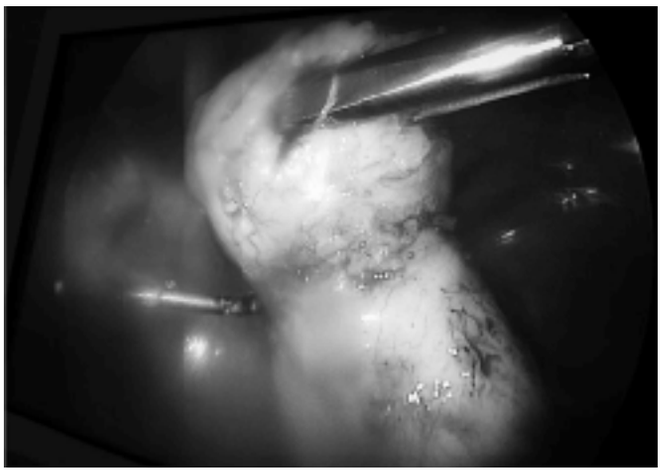
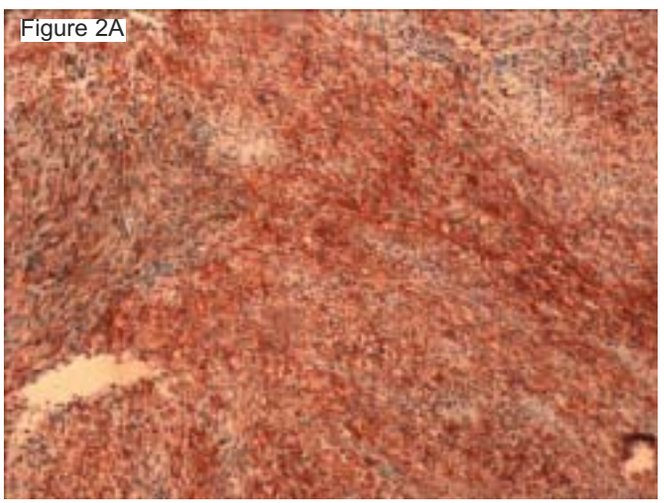


Figure 1: Endoscopic appearance of the mass and the ovary

ery of the right ovary. The mass was incised from the ovarian side by unipolar cautery and then excised by using bipolar cautery and scissors. Small supplying vessels were carefully fulgurated and hemostasis was achieved. The right ovary was remained intact as possible as could be. The mass was cut to smaller pieces intracorporeal and then removed from the right pelvic trocar site. Intraoperative frozen section inspection of the tissue did not reveal any possible malignancy. Appearances of appendix, bowel, liver and gall bladder were unremarkable. After irrigating abdominal cavity with copious of saline, operation was terminated. The patient was discharged after the surgery without any complication. The patient so far has spontaneous and regular menses without any complaint.

Microscopic evaluation of the mass, revealed crossing of spindles of smooth muscle cells. Hyalinised collagen filaments were sometimes seen near the cells. Mytotic activity was low as 1/10 high powerfield (Figure 2a). There was no necrosis. Immunocytochemistry to differentiate the mass from thecoma was applied and SMA was found positive where as calretinin and desmin were negative (Figure 2b). The final pathologic diagnosis of the specimen was reported as POL.



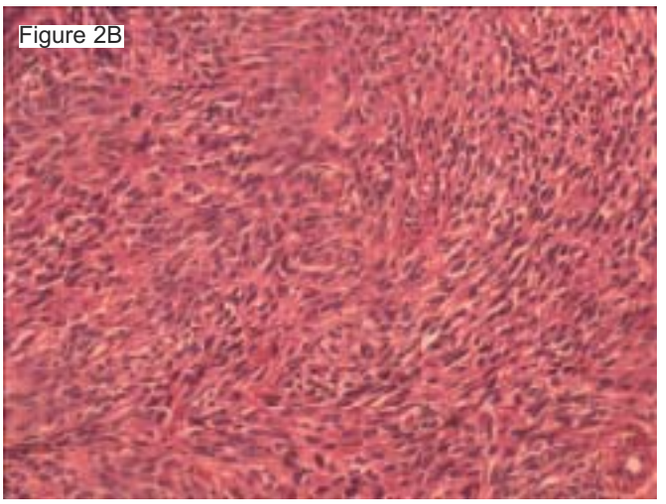


Figure 2A-2B: H-Ex100 crossing spindles. Immunohystochemistry : SMA (+)

Discussion

Illustrations of POL are scarce and accounts less than 1% of all ovarian neoplasms (1). The case we presented here is unique from several aspects. 1- POL was managed endoscopically, 2- pelvic kidney was coexisting with the pathology, 3- the patient had a history of infertility necessiating IVF treatment including gonadotropin stimulation. The case here is typically diagnosed in the reprocductive years as the majortity, since only 15% cases were reported postmenopausal. The placement of the POL behind the right ovary and the solid appearance as well as the pelvic kidney probably obscured the detection in initial examinations. We do not have any information regarding the appearance of the ovaries during the last c-section performed 5 years ago also.

The differential diagnoses for ovarian leiomyoma include other spindle cell lesions like ovarian fibroma/thecoma, cellular fibroma/thecoma, and sclerosing stromal tumor.

Immunohistochemically desmin shows diffuse positivity in leiomyoma. However, in fibromatous tumors, it is typically negative or only focally positive. Smoothmuscle actin is often positive in both leiomyoma and fibromatous tumors (5,6).

Most ovarian leiomyoma described in literature asymptomatic and were discovered incidentally In symptomatic cases, clinical presentations are variable (2,7). Usually ovarian leiomyoma have a benign course. Complete surgical resection is the preferred treatment (8).

They probably arise from smooth muscle cells in the ovarianhilar blood vessels but other possible origins includecells in the ovarian ligament, smooth muscle cells ormultipotential cells in the ovarian stroma, undifferentiatedgerm cells, or cortical smooth muscle metaplasia (3,9).

The features of ovarian leiomyoma are very characteris-

tic,but due to its rarity several other tumors were included inthe differential diagnosis. The main differential diagnostic considerations for ovarian leiomyoma include sex-cordstromal tumors, such as fibroma/thecoma, particularly ifthere is a large amount of stromal fibrosis or if the tumors are small (3,10,11).

Leiomyomas of the ovary are macroscopicallyand microscopically indistinguishable from uterineleiomyomas (12). Degenerative changes such ashyalinization, calcification, and cyst formation maybe seen in ovarian leiomyomas as well. Primaryleiomyosarcoma of the ovary differs from its benigncounterpart in being hypercellular and in showingincreased mitotic activity (>10 mitotic figures per10 high power fields).

Magnetic resonance imaging can distinguishbetween uterine and ovarian leiomyoma bydemonstrating the supplying vessels arising directlyfrom the myometrium (13). In our case MRI showed the mass arising from the ovary however was not helpfull in differential diagnosis.

As a conclusion solid masses rising from ovaries in reproductive years of woman should rise suspicion of POL and conservative approaches should be preferred before agresive modalities such as laparotomy and removal of adnexea.

References

1. Kobayashi Y. Murakami R. Sugizaki K. Yamomoto K. Sasaki S. Tajima N. et al. Primary leiomyoma of the ovary: A case report. Eur Radiol 1998;8(8):1444-6.
2. Matamala MF. Nogales FF. Aneiros J. Herraiz MA. Caracuel MD. Leiomyomas of the ovary. Int J Gynecol Pathol 1988;7(2):190-6.
3. Doss BJ. Wanek SM. Jacques SM. Qureshi F. Ramirez NC. Lawrence WD. Ovarian leiomyomas:clinicopathologic features in fifteen cases. Int J Gynecol Pathol 1999; 18(1):63-8.
4. Nichols GE. Mills SE. Ulbright TM. Czernobilsky B. Roth LM. Spindle cell mural nodules in cyctic ovarian mucinous tumors. A clinicopathologic and immunohistochemical study of five cases. Am J Surg Pathol 1991;15(11):1055-62.
5. Tomas D. Lenicek T. Tuckar N. Puljiz Z. Ledinsky M. Kruslin B. Primary ovarian leiomyoma associated with endometriotic cyst presenting with symptoms of acute appendicitis: A case report. Diagn Pathol 2009 Jul 30;4:25.
6. Deavers MT. Malpica A. Liu J. Broaddus R. Silva EG. Ovarian sex cord-stromal tumors: An immunohistochemical inhibin. Mod Pathol 2003;16(6):584-90.
7. Zorlu CG, Cengiz S, Harmanlı HO. Primary ovarian leiomyoma. A case report. Gynecol Obstet Invest 1993; 36(3):191-2.
8. Jena A. Patnayak R. Vijaylaxmi B. Lakshmi AY. Primary Ovarian Leiomyoma: An Uncommon Entity-Case Report and a Brief Review of Literature. J Basic Clin Reprod Sci 2013;2(1);54-6.
9. Emovon EU. Cahill DJ. Joels LA. Stegmann MH. Bilateral primary ovarian leiomyoma:a rare cause of ovarian tumour in a young woman. J Obstet Gynaecol 1999; 19(6):676.
10. Lerwill MF. Sung R. Oliva E. Prat J. Young RH. Smooth muscle tumors of the ovary: a clinicopathologic study of 54 cases emphasizing prognostic criteria, histologic variants and differential diagnosis. Am J Surg Pathol 2004; 28(11):1436-51.
11. Prayson RA. Hart WR. Primary smooth-muscle tumors of the ovary. A clinicopathologic study of four leiomyoma and two mitotically active leiomyomas. Arch Pathol Lab Med 1992;116(10):1068-71.
12. Mathew M. Krolikowski A. Al-Haddabi I. Nirmala V. Primary ovarian leiomyoma. Saudi Med J 2005;26(2): 306-7.
13. Togashi K. Endometriosis. In: MRI of the female pelvis. Tokyo: Igakushoin 1993, p:203-26