

## Multiple Recurrent Mature Cystic Teratoma Of The Same Ovary: A Case Report And Literature Review

### *Aynı Overin Multipl Matür Rekürrent Kistik Teratomu: Vaka Sunumu Ve Literatürün Gözden Geçirilmesi*

İbrahim ALANBAY, Hakan ÇOKSUER, Mutlu ERCAN, Emre KARAŞAHİN, Uğur Keskin, İskender BAŞER

*Gülhane Askeri Tıp Akademisi, Kadın Hastalıkları ve Doğum A.D, Etlik, Ankara.*

#### ABSTRACT

In this case report, we emphasize the recurrence and multilocularity properties of mature cystic teratomas. A 26 year old G0 woman complaining of stomachache and abdominal distention attended to the gynecology outpatient clinic. Transvaginal ultrasound revealed a 9 cm right ovarian mass with echogenecities suggesting sebaceous material within multiple dermoid cyst loci. A diagnostic laparoscopy was planned; seven separate loci of the dermoid cysts ranging between 2 - 5 cm with a total diameter of approximately 9 cm, were located on the right ovary. The patient was discharged on the second day after the operation without any complication. This patient is the only case having the properties of both recurrence and multilocularity in the Medline database search. Especially, the regular follow-up of the young patients has a clinical importance in early detection of the recurrent masses and during the surgeries of the recurrent cases, the surgeon should be careful about the bilaterality or multilocularity of the tumor.

Key Words: Laparoscopy, Multiple dermoid cysts

#### ÖZET

Bu olgu sunumunda, olgun kistik teratomların nüks ve multilokülerite özelliklerini vurguladık. 26 yaşında G0 kadın mide ağrısı ve abdominal distansiyon yakınmalarıyla jinekoloji polikliniğine başvurdu. Transvaginal ultrasonda sağ overde multipl dermoid kist lokusları içinde ekojenik yağ materyali düşündüren 9cm kitle gözlemlendi. Sağ overe yerleşmiş totalde yaklaşık 9cm çaplı 2 ile 5 cm arasında değişen dermoid kistin 7 ayrı lokasyonuna tanısal laparoskopisi planlandı. Hasta 2. günde komplikasyonsuz bir operasyon sonrası taburcu edildi. Bu hasta, Medline veritabanında rekürren ve multiloküler özelliğe sahip tek olgudur. Özellikle genç hastaların düzenli izlemi tümörün multiloküleritesi ve bilateralitesi hakkında cerrahın dikkatli olmasında, nüks vakaların cerrahisinde ve nüks kitlelerin erken tespitinde klinik öneme sahiptir.

Anahtar Kelimeler: Laparoskopisi, Multipl dermoid kist

#### INTRODUCTION

Mature cystic teratomas (dermoid cyst) originate from the germ cells and they form 15% of all ovarian tumors (1).

Ninety five percent of all ovarian teratomas are mature cystic teratomas and they are generally seen on the second or third decades of life. These tumors contain mature tissues originated from ectoderm, mesoderm and/or endoderm. The most frequent tissues encountered are ectodermal elements such as skin, hair, sweat and sebaceous glands (2).

The ultrasonographic image of the echogenicity of the sebaceous material is important in the diagnosis of the dermoid cysts (3). As Approximately 43 - 70% of the dermoid cyst cases are seen in the reproductive period, 20% are seen in the postmenopausal period (4). These tumors can show malignancy or malign transformation in a ratio of 1-3%, however this ratio decreases in the tumors seen in the young patients. Nearly 15% of the mature cystic teratomas are bilateral (5). The recurrence rate of these tumors is 3-4%. The recurrence usually takes place in the same ovary (6). In this case report, we emphasize the recurrence and multilocularity of these tumors. As we know, this is the first reported case having the properties of both recurrence and multilocularity in the Pubmed database search.

### **CASE REPORT**

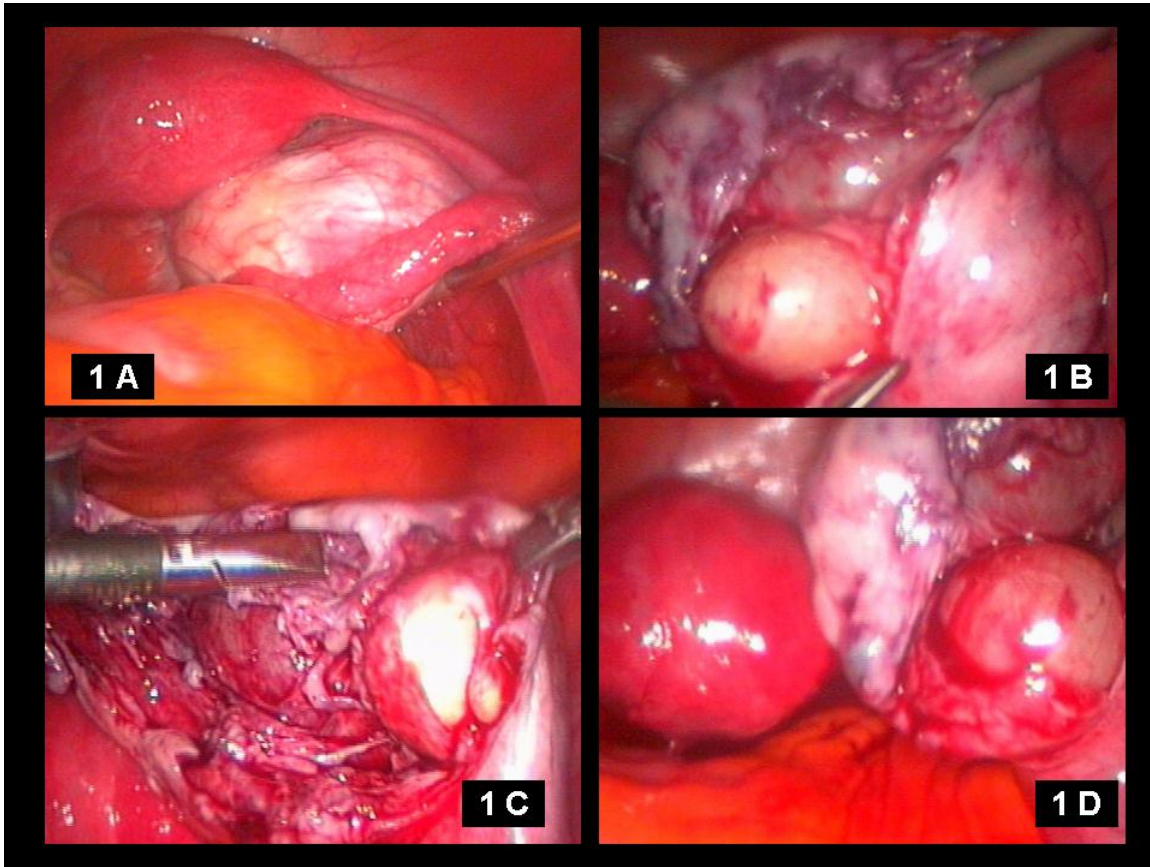
A 26 year old G0 woman complaining of stomachache and abdominal distention attended to the gynecology and obstetrics outpatient clinic of the Gülhane Military Medicine Academy. From her history, we learned that she had been married for 6 years. She had menarche at 13 years and she had normal menstrual pattern since then. Three years ago, she had attended to our clinic with the same complaints and she had undergone laparoscopy because of a 9 cm right adnexal mass, which had been diagnosed to be a dermoid cyst of the right ovary. In her pelvic examination, a palpable mass was detected at the right lower quadrant of the abdomen.

The uterus had normal dimensions. Endometrial thickness was 4 mm in the ultrasonography. Transvaginal ultrasound revealed a 9 cm right ovarian mass with echogeneities suggesting sebaceous material within multiple dermoid cyst loci. Her leucocyte count was 6400/mm<sup>3</sup>, hemoglobin and hematocrit values were 13.3 g/dl and 39.3% respectively, and sedimentation rate was 36 mm per hour.

A diagnostic laparoscopy was planned, where the uterus and the left ovary were seen to be normal, seven separate loci of the dermoid cysts ranging 2 - 5 cm with a total diameter of approximately 9 cm, were located on the right ovary. Antimesenteric surface of the right ovarian mass was incised by monopolar cauterisation, the cysts were excised by the help of the bipolar dissectors, hydrodissection and laparoscopic forceps. They were taken out of the abdomen with the help of the endobag without spillage into the abdominal cavity (Figures 1A, 1B, 1C and 1D). All the materials were sent to the pathologic examination and the pathological examination was reported as dermoid cyst for all of the 7 cysts.

### **DISCUSSION**

Mature cystic teratomas are generally diagnosed incidentally during the abdominopelvic surgeries or physical examinations performed for other reasons. In the different series, asymptomatic tumor rate ranges between 6 - 64.5% (1,7).



**Figure 1**

The most frequent symptom of the dermoid cysts is lower abdominal pain which is seen in 47.6% of all cases (8). Mature cystic teratomas can be preoperatively diagnosed by means of the transvaginal ultrasonographic properties (3). The image of the fatty content of the cyst can awake the suspicion of the presence of a mature cystic teratoma in the computerized tomography, but these diagnostic procedures aren't sufficient to determine the malign potential of these tumors completely in the preoperative period (9). The instrumental developments in the laparoscopy offer improved surgical procedures in the gynecology.

Today, laparoscopic approach is generally preferred for the mature cystic teratomas, but it should be remembered that the rupture of the cysts is seen more frequent in laparoscopy than in laparotomy (10,11). The chemical peritonitis resulting from the spillage of the contents into the peritoneal cavity is rare. During the operative procedures, washing the peritoneal cavity with saline decreases this risk (12). During organ preserving surgery, the rupture of the cyst can cause the spillage of the cells with malign potential into the peritoneal cavity. Thus; while performing the excision of the mature cystic teratomas, the standards of the oncologic surgery must be applied (13).

Also in the perimenopausal and postmenopausal periods, performing oophorectomy is one of the suggested surgical approaches. Oophorectomy is also suggested in the young patients with malignant potential (11). Tumors growing fast and/or tumors with a diameter more than 7cm should be regarded as having increased malignant potential. In these cases, laparotomy or laparoscopic oophorectomy should be taken into account for the therapy (11).

In the literature, it is observed that mature cystic teratomas can show recurrence with a rate of 3 – 4% (6). In different reports, it is emphasized that especially cysts with a diameter less than 2 cm can be ignored during preoperative transvaginal ultrasonographic imaging but these cysts can later be diagnosed as recurrences (1,3). The previous history of the dermoid cyst excision three years ago and undergoing a repeat laparoscopic dermoid cyst operation now make our case a good example for this emphasis. Also in this case, during operative laparoscopy procedure; it was seen that seven different dermoid cystic masses were located in the different regions of the ovary. As it was a multilocular and recurrent dermoid cyst, it had a special clinical value. Recently Song et al. studied 20 recurrent dermoid cyst cases with a retrospective analysis where 20 recurrent dermoid cyst cases were compared with 40 non recurrent dermoid cyst cases.

The investigators realized that the recurrence rate was higher in the patients who were younger at the time of the first diagnosis. At the same time, bilaterality and multilocularity were observed more often in the recurrent cases. They found out that the recurrence occurred nearly 1-15 years after the first operation, and the recurrence rate was 2.5% after ovary protected surgeries (14). In our case, the age of the patient at the first time of the diagnosis was 26; the recurrence period was 3 years and the recurrent dermoid cyst showed multilocularity. These properties resembled the results of the study argued in the previous paragraph. As a result, the best approach to the mature cystic teratomas is operative laparoscopy in today's conditions, also despite their malign or recurrence potentials of the dermoid cysts, the biopsies from the contralateral ovary aren't warranted during the operative procedures (15).

Especially, the regular follow-up of the young patients has a clinical importance in the early detection of the recurrent masses and during the surgeries of the recurrent cases, the surgeon should be careful about the bilaterality or multilocularity of the tumor.

## REFERENCES

1. Comerci JT, Jr., Licciardi F, Bergh PA, Gregori C, Breen JL. Mature cystic teratoma: a clinicopathologic evaluation of 517 cases and review of the literature. *Obstet Gynecol* 1994;84:22-28.

2. Hunter V, Barnhill D, Jadmin D, Crooks L: Ovarian mucinous cystadenocarcinoma of low malignant potential associated with a mature cystic teratoma. *Gynecol Oncol* 1988;29:250-254.
3. Mais V, Guerriero S, Ajossa S, Angiolucci M, Paoletti AM, Melis GB. Transvaginal ultrasonography in the diagnosis of cystic teratoma. *Obstet Gynecol* 1995;85:48-52.
4. Canis M, Mage G, Pouly JL, Wattiez A, Manhes H, Bruhat MA. Laparoscopic diagnosis of adnexal cystic masses: a 12-year experience with long-term follow-up. *Obstet Gynecol* 1994; 83:707-712.
5. Pfeifer SM, Gosman GG. Evaluation of adnexal masses in adolescents. *Pediatr Clin North Am* 1999;46:573-592.
6. Chapron C, Dubuisson JB, Samouh N, Foulot H, Aubriot FX, Amsquer Y, et al. Treatment of ovarian dermoid cysts. Place and modalities of operative laparoscopy. *Surg Endosc* 1994;8:1092-1095.
7. Pepe F, Panella M, Pepe G, Panella P, Permissi F, Arilioni S. Dermoid cysts of the ovary. *Eur J Gynaecol Oncol* 1986;7:186-191.
8. Peterson WF, Prevost EC, Edmunds FT, Hudley JM, Morris FK. A clinicostatistical study of 1007 cases with a review of the literature. *Am J Obstet Gynecol* 1955;70:368-382.
9. Buy JN, Ghossain MA, Moss AA, Bazot M, Doucet M, Hugol D, et al. Cystic teratoma of the ovary: CT detection. *Radiology* 1989;171:697-701.
10. Templeman CL, Fallat ME, Lam AM, Perlman SE, Hartmeck SP, O'Connor DM. Managing mature cystic teratomas of the ovary. *Obstet Gynecol Surv* 2000;55:738-745.
11. Mecke H, Savvas V. Laparoscopic surgery of dermoid cysts: intraoperative spillage and complications. *Eur J Obstet Gynecol Reprod Biol* 2001;96:80-84.
12. Zanetta G, Ferrari L, Mignini-Renzini M, Vignali M, Fadini R. Laparoscopic excision of ovarian dermoid cysts with controlled intraoperative spillage. Safety and effectiveness. *J Reprod Med* 1999;44:815-820.
13. Norris HJ, Zirkin HJ, Benson WL. Immature (malignant) teratoma of the ovary: a clinical and pathologic study of 58 cases. *Cancer* 1976;37:2359-2372.
14. Song YN, Zhu L, Long JH. Recurrent mature ovarian teratomas: retrospective analysis of 20 cases. *Zhonghua Yi Xue Za Zhi* 2007; 87:1184-1186.
15. Morgante G, Ditto A, la Marca A, Trotta V, De Leo V. Surgical treatment of ovarian dermoid cysts. *Eur J Obstet Gynecol Reprod Biol* 1998;81:47-50.