ijlpr 2023; doi 10.22376/ijlpr.2023.13.2.L146-L152

International Journal of Life science and Pharma Research

ISSN 2250-0480

Case Report

Endometrial Polyp With Teratoma

A Case Report of Endometrial Polyp with Bilateral Cystic Teratoma Ovary

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Abstract: Benign ovarian teratomas or dermoid cysts are the commonest germ cell tumour of ovaries, accounting for 10 to 15% of all ovarian tumours. The common age of presentation includes women's reproductive age group and post-menopausal age. These lesions can be benign, like mature teratoma or malignant, like immature teratoma, yolk sac tumour, and mixed germ cell neoplasm. These lesions are usually asymptomatic, or they can present with varying symptoms and signs. Diagnosis includes imaging and measurement of levels of tumour markers. Here we report a case of a 48-year-old woman who presented with menorrhagia for four years. The patient initially underwent dilation and curettage for similar complaints in the past, following which her cycles regularized. Later the patient was started on medications for the recurrence of symptoms. Examination revealed no abnormalities. The patient was further investigated with ultrasound and MRI pelvis and proceeded with bilateral salpingo-oopherectomy. Biopsy revealed features suggestive of benign ovarian teratoma. The patient has managed accordingly and is in regular follow-up. Benign ovarian tumours are mostly asymptomatic or present with nonspecific symptoms, of which abdominal pain and mass are seen in many cases. The commonest of these tumours is a benign mature cystic teratoma or dermoid cyst, which is bilateral. Though only one per cent contain a secondary malignancy arising from one of their components, early recognition and timely intervention are necessary to avoid untoward complications. Therefore, we recommend follow-up of such cases with radiological and blood investigations.

Keywords: Dermoid cyst, ovarian teratoma, benign ovarian tumours, teratoma, recurrent endometriosis

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Received On 21 September, 2022

Revised On 30 December, 2022

Accepted On 19 January, 2023

Published On 1 March, 2023

Funding This research did not receive any specific grant from any funding agencies in the public, commercial or not for profit sectors.

Citation Kaavya M and Madhvi Singh , A Case Report of Endometrial Polyp with Bilateral Cystic Teratoma Ovary.(2023).Int. J. Life Sci. Pharma Res.13(2), L146-L152 http://dx.doi.org/10.22376/ijlpr.2023.13.2.L146-L152

1. INTRODUCTION

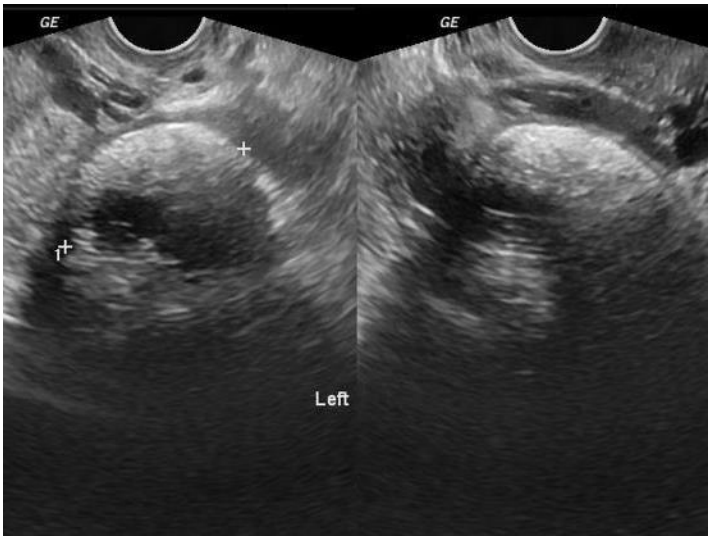
Ovarian primordial germ cells (OGCTs) are the source of ovarian germ cell cancers. These germ cell tumours can be benign (adult teratoma) or cancerous, like immature teratoma, dysgerminoma, yolk sac tumour, and mixed germ cell neoplasm. These cell populations typically include cells derived from ectoderm, endoderm, and mesoderm. They are separated into four groups, like Monodermal or highly specialized OGCTs, which comprise about 20 to 25 per cent of all ovarian neoplasms. Still, only about 5 per cent of all are malignant ovarian neoplasms. OGCTs make up about 70% of ovarian neoplasms in young females between the ages of 10 and 30, where they are most common. Patients may exhibit one or more symptoms or be asymptomatic. A thorough medical history and physical examination are parts of the diagnostic evaluation, identical to those given to patients with other adnexal masses. A pelvic ultrasound is often the first imaging study to characterize an adnexal mass, and histology is used to confirm the diagnosis. The presence of an adnexal mass on pelvic imaging and an elevated level of an associated tumour marker preoperatively strongly imply the diagnosis. The majority of teratomas are cystic (mature cystic teratoma; dermoid cyst), consisting of mature differentiated tissue from ectodermal (skin, hair follicles, sebaceous glands), mesodermal (muscle, urinary), and endodermal (lung, gastrointestinal) origins. These cysts arise due to failure in meiosis II / meiosis I. Rarely, a teratoma is solid and composed of organized structures and benign-appearing heterogeneous tissue aggregates from all three cell layers. A benign cystic teratoma's hallmark macroscopic appearance is a multicyclic mass that includes hair, teeth, and skin mixed into sebaceous, viscous, sticky, and frequently foul-smelling material. Asymptomatic patients with developed teratomas predominate. The symptoms, if any, are dependent on the mass's size. Torsion occurs frequently. Although rare, dermoid cysts can rupture and discharge sebaceous material into the abdominal cavity. The immediate effects of rupture include shock, bleeding, peritonitis and adhesions. Unilateral solid teratomas are the most common type. In 10 to 17% of cases, bilateral mature teratomas might be synchronous or metachronous, and peritoneal implants have also been reported. Considering how grossly difficult or impossible it may be to distinguish these neoplasms from malignant solid immature teratomas, which are nearly invariably solid, many sites may need to be sampled. Here we report such a case who initially presented as endometrial poly was identified as benign cystic ovarian teratoma [1,2,3]

2. CASE PRESENTATION

A 48-year-old gravida 2, para 2 woman presented with complaints of heavy menstrual bleeding for the past four years. Each cycle occurred at a frequency of once in 15 days. History of the passage of clots is present. The bleeding was not associated with pain. The patient had undergone dilation and curettage for the same complaints, and the histopathology reported a benign endometrial polyp. Following this, her cycles were regularized. Again, after one year, the patient reported similar complaints for which oral contraceptives were given. Subsequently, her cycles regularized. Due to the recurrence of symptoms, the patient was supplemented with Regesterone for two weeks, following which the patient presented to our OPD. Her last childbirth was 15 years back. No history of use of contraceptives and not sterilized. The patient has been recently diagnosed with type 2 diabetes mellitus and is on medications. Bowel and bladder habits are normal. There is no family history of any cervix, uterine or ovarian cancer. On examination, no pallor was noted, and the thyroid and bilateral breast were clinically normal. Systemic examination revealed no mass clinically palpable per abdomen. Speculum examination revealed a necrotic polyp seen through OS, and the vagina was healthy. Per vaginum examination, the cervix was pointing downwards, and the cervical lip was felt all around the polyp. The polyp was necrotic and bled on touch. Uterus was enlarged, measuring around 10 to 12 weeks' size. Right-sided fornical fullness is felt. Left-sided fornix was free and non-tender. Blood investigations showed low haemoglobin. The thyroid function test was normal. HbA1C was within normal limits. Ultrasound pelvis showed a bulky uterus measuring 12x6x7 cm, with an endometrial thickness of 19mm. The right ovary was normal. The left ovary showed a heterogeneous mass lesion measuring 6x5 CM with cystic and echogenic areas with posterior acoustic shadowing, suggestive of a dermoid cyst. (Figure1) MRI pelvis showed a bulky uterus, left ovarian dermoid cyst without torsion and cystoglandular hyperplasia of the endometrium with polypoidal growth. (Figure 2)

3. TREATMENT AND FOLLOW UP

The patient proceeded with a total abdominal hysterectomy with a bilateral salpingo-oopherectomy. Intraoperative findings were a uterus of 12 weeks in size, a left tube normal, and a left ovary was seen with lobulated cysts. Right tube and ovaries normal. (Figure 3 A – D) The histopathological report suggested chronic cervicitis with Nabothian cysts (Figure 4). Endometrium showed a partially infected benign endometrial polyp with changes secondary to progesterone. A bilateral benign cystic teratoma of the ovary was noted on the right side of 1 cm and the left side of 10 cm. The patient had an uneventful post-operative period and was discharged on day 5 of the postoperative day. On review, the patient was referred promptly to the oncological department for further management.



PELVIS REPORT

Uterus
Appears bulky and measures ~12.2 x 6.6 x 7.7 cm , anteflexed.
Myometrium shows normal echogenicity
Endometrium measures ~ 13 mm in the body.**Focal thickening(~ 19 mm) of the endometrium noted in the fundal region.**
No focal lesion seen.

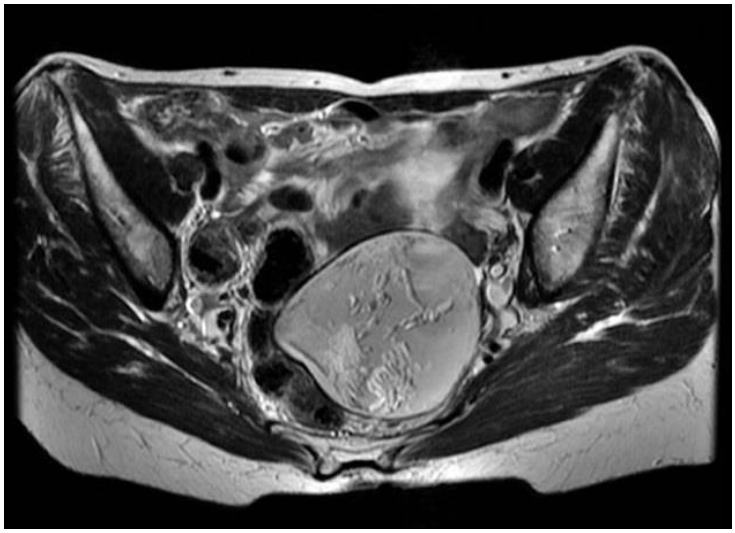
Ovaries:
Right ovary measures ~ 2.9 x 2.0 cm.
Left ovary appears bulky and measures ~ 6.5 x 5.9 cm.
A heterogeneous mass lesion measuring ~ 6.2 x 5.3 cm with cystic and echogenic areas with posterior acoustic shadowing noted within the left ovary.

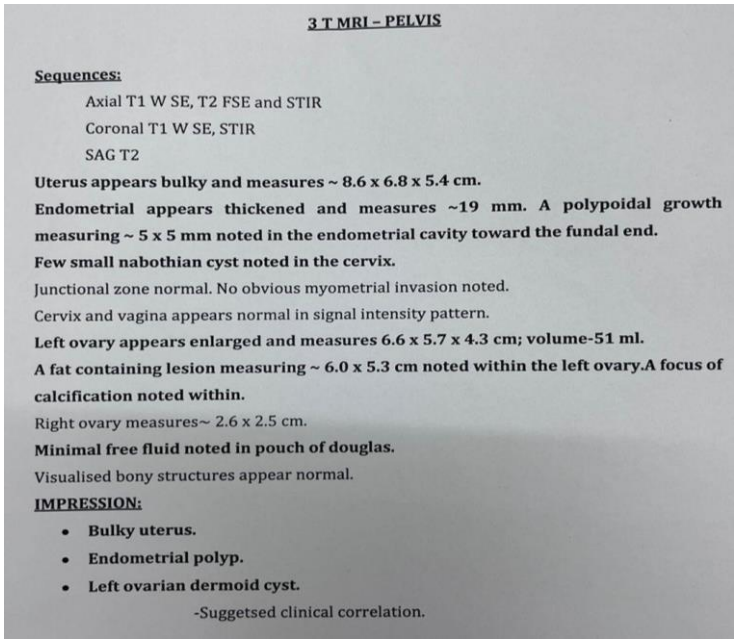
POD:
No free fluid.
No adnexal mass lesion seen

IMPRESSION:
- **Bulky uterus**
- **Left ovarian dermoid cyst.**
- **Focal thickening of the endometrium in the fundal region.**

- **Suggested clinical correlation**

Fig 1: Ultrasound pelvis showed a bulky uterus measuring 12x6x7 cm, with an endometrial thickness of 19mm. The right ovary was normal. However, the left ovary showed a heterogeneous mass lesion measuring 6x5 CM with cystic and echogenic areas with posterior acoustic shadowing, suggestive of a dermoid cyst.





3 T MRI – PELVIS

Sequences:

Axial T1 W SE, T2 FSE and STIR
Coronal T1 W SE, STIR
SAG T2

Uterus appears bulky and measures ~ 8.6 x 6.8 x 5.4 cm.
Endometrial appears thickened and measures ~19 mm. A polypoidal growth measuring ~ 5 x 5 mm noted in the endometrial cavity toward the fundal end.
Few small nabothian cyst noted in the cervix.
Junctional zone normal. No obvious myometrial invasion noted.
Cervix and vagina appears normal in signal intensity pattern.
Left ovary appears enlarged and measures 6.6 x 5.7 x 4.3 cm; volume-51 ml.
A fat containing lesion measuring ~ 6.0 x 5.3 cm noted within the left ovary.A focus of calcification noted within.
Right ovary measures~ 2.6 x 2.5 cm.
Minimal free fluid noted in pouch of douglas.
Visualised bony structures appear normal.

IMPRESSION:

- **Bulky uterus.**
- **Endometrial polyp.**
- **Left ovarian dermoid cyst.**

-Suggetsed clinical correlation.

Fig 2: MRI-PELVIS

The report shows a bulky uterus measuring 8.6*6.8*5.4 cm. The endometrium appears thickened, measuring 19mm. A polypoidal growth is seen in the uterine cavity measuring 5*5mm. The left ovary is enlarged, measuring 6.6*5.7*4.1cm (51ml). Along with this, a fatty lesion is noted in the left ovary with foci of calcification.

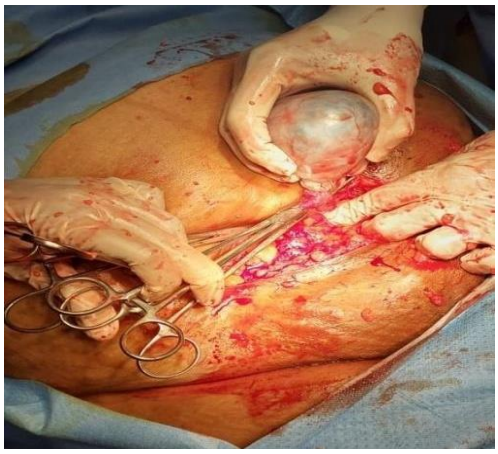
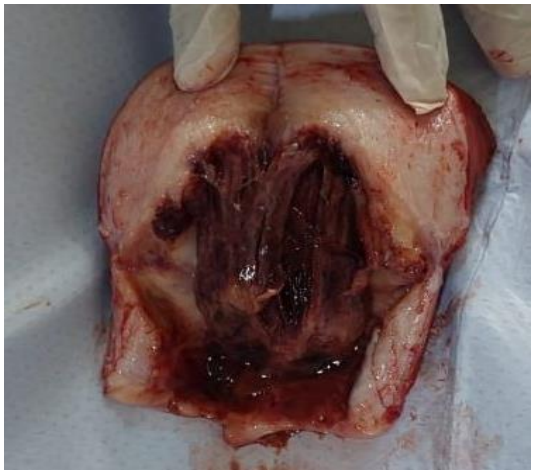


Fig 3: A-D Intraoperative findings of the patient.

A - Left-sided lobulated ovary appears solid and firm in consistency with a glistening capsule. There is no apparent pedicle attached to the cyst. The has a small vascular clood supply all over the cyst.

B- Cut section of the uterus shows atrophied endometrium with a partially infected endometrial polyp that seems friable and apparent bleeding from the endometrial cavity could be seen.



C- Cut a section of the uterus showing thinned-out endometrium along with two walls opposing each other. These are the changes noted secondary to progesterone.

D- Specimen of cystic teratoma of left ovary retrieved post operatively. The specimen is irregularly globular with a glistening capsule. The blood supply of the teratoma is well formed, showing small radial branches all over the teratoma.

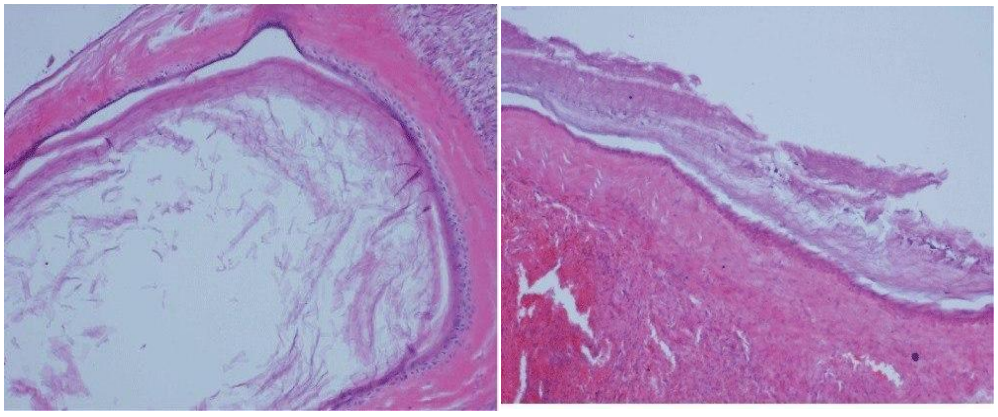


Fig 4: Histopathological examination demonstrating Nabothian cyst and endometrial thinned out and atrophic. Hence, histopathology findings correlate well with the radiological and intra-operative findings.

4. DISCUSSION

The word "TERATOMA" originated from "TERATON", meaning monster. The term teratoma was in 1863 by Virchow. The commonest among germ cell tumours are teratomas. These tumours are composed of different cell types derived from three germ cell layers, namely mesoderm, ectoderm, or endoderm. (one or more accordingly) [5] These tumours arise from totipotent cells. They are present either in midline or paraxial. Following sacrococcygeal teratomas, which account for 57%, ovarian teratoma is the second most common site. These tumours are generally benign, but around one to two per cent undergo malignant transformation. These account for 10 to 20%, and it is most common between 20 to 40 years of age. They are classified as benign or malignant, depending on the presence of embryonic elements. [6] ovarian teratoma may be complicated and present as a ruptured lesion, ovarian torsion, infection or malignant teratoma[7,8] Uterine teratomas as a primary site are very rare. Only a few cases are available in the literature. Here we report a case of benign cystic

teratoma of the left ovary and ----- of the uterus. Histogenesis of such teratomas has been hypothesized as cells originate from residual tissues that remain, termed blastomere theory. According to another theory, namely parthenogenetic theory, these tumours arise from primordial cells displaced during embryogenesis.[9] Dermoid cysts or cystic teratomas are the most common in the ovaries and testes. Rarely are they reported in other places, such as the anterior mediastinum, neck and sacrococcygeal region. Histopathological examination revealed squamous epithelium lined cysts, filled with sebaceous material [10]They are usually unilateral (involving right ovary) in 72% and bilateral in 12% [11]. A microscopic examination confirms the diagnosis. Cystic teratomas are generally asymptomatic, often identified as incidental findings followed by presenting with abdominal pain. Other symptoms include increasing abdominal girth, Gastrointestinal or urinary symptoms (due to compression of the ureter). Generalized symptoms like fever, cachexia, severe abdominal pain, and vaginal bleeding can also occur in advanced diseases.[12,13]

5. TREATMENT

The guiding principles for the more prevalent epithelial ovarian cancer care are generally applicable to all forms of malignant OGCTs (EOC). For diagnosis, staging, and treatment, surgery is necessary. Like EOC, people with OGCTs should have a thorough abdominal examination, complete surgical staging (for evident early-stage disease), and, if safe and possible, optimal cytoreduction (for metastatic disease).[14,15] Most OGCTs are stage I when they first manifest, and most patients can be successfully treated with fertility-preserving surgery rather than bilateral salpingo-oophorectomy and total abdominal hysterectomy. Adult females with malignant OGCTs are very responsive to platinum-based chemotherapy, and treatment is often curative. Due to this aspect, along with the poor results from surgery alone (even for stage I illness), adjuvant cisplatin-based chemotherapy is now routinely administered to most adult patients, except for those with stage IA or IB dysgerminoma and stage IA, grade 1 immature teratoma. [16,17] Management of such cases is surgical. Management depends on the patient's age. In post-menopausal women, as in our case, oophorectomy is considered. A histological examination of the surgical specimen is necessary to confirm the diagnosis and staging (in case of carcinoma). If malignant transformation is evident, complete resection with bilateral salpingo-oophorectomy, hysterectomy, and even platinum-based chemotherapy is the mainstay of treatment. Laparoscopy is the standard gold technique. [18,19] Prognosis is dependent on disease extent and complication. Benign cystic teratomas tend to have an excellent prognosis following surgical resection. The recurrence risk is minimal and usually within 2 to 10 years.[20,21]

6. CONCLUSION

Benign ovarian tumours are the most common in women and are generally asymptomatic. However, they may present with nonspecific symptoms such as menorrhagia, as in our case. Though 90% are benign, investigations are needed to rule out malignancy, and as in our cases, with elevated levels of tumour markers, the patient must be followed up following surgical excision.

7. AUTHORS CONTRIBUTION STATEMENT

Dr Kaavya reviewed the patient at OPD, did the surgery and drafted the first manuscript. Dr Madhavi reviewed manuscript drafts. Dr kaavya and Dr Madhvi read the histological slides and reviewed manuscript drafts. Dr Kaavya provided valuable input towards designing the manuscript. Dr Madhvi assisted with the surgery and reviewed the manuscript, which all authors later approved.

8. CONFLICT OF INTEREST

Conflict of interest declared none.

9. REFERENCES

1. Papadia A, Rutigliani M, Gerbaldo D, Fulcheri E, Ragni N. Mature cystic teratoma of the uterus presenting as an endometrial polyp. Ultrasound Obstet Gynecol. 2007 Apr;29(4):477-8. doi: 10.1002/uog.3969, PMID 17330830.
2. Sengar K, Trisal M, Deb S, Dawar R. Mature cystic teratoma of the uterine surface and ovary with adenocarcinoma of the endometrium: an unusual case scenario and literature review. Middle East J Cancer. 2016 Oct 1;7(4):229-33.
3. Utsunomiya D, Shiraishi S, Kawanaka K, Lwakatare F, Tomiguchi S, Kido R et al. Struma ovarii coexisting with mucinous cystadenoma detected by radioactive iodine. Clin Nucl Med. 2003 Sep 1;28(9):725-7. doi: 10.1097/01.rlu.0000082657.06194.b3, PMID 12972992.
4. Mui MP, Tam KF, Tam FK, Ngan HY. Coexistence of struma ovarii with marked ascites and elevated CA-125 levels: case report and literature review. Arch Gynecol Obstet. 2009 May;279(5):753-7. doi: 10.1007/s00404-008-0794-1, PMID 18807056.
5. Iwanaga S, SHIMADA A, HASUO Y, YOH S, MIYAJIMA S, NISHIMURA H et al. Immature teratoma of the uterine fundus. Kurume Med J. 1993 Dec 10;40(3):153-8. doi: 10.2739/kurumemedj.40.153, PMID 8139215.
6. Palombini L, Vecchione R, De Rosa G, Cortese F. Benign solid teratoma of the sigmoid colon: report of a case. Dis Colon Rectum. 1976 Jul 1;19(5):441-4. doi: 10.1007/BF02590830, PMID 939159.
7. Wang WC, Lee MS, Ko JL, Lai YC. Origin of uterine teratoma differs from that of ovarian teratoma: a case of uterine mature cystic teratoma. Int J Gynecol Pathol. 2011 Nov 1;30(6):544-8. doi: 10.1097/PGP.0b013e31821c3205, PMID 21979590.
8. Caruso PA, Marsh MR, Minkowitz S, Karten G. An intense clinicopathologic study of 305 teratomas of the ovary. Cancer. 1971 Feb;27(2):343-8. doi: 10.1002/1097-0142(197102)27:2<343::aid-cncr2820270215>3.0.co;2-b, PMID 5100397.
9. Saba L, Guerriero S, Sulcis R, Virgilio B, Melis G, Mallarini G. Mature and immature ovarian teratomas: CT, US and MR imaging characteristics. Eur J Radiol. 2009 Dec 1;72(3):454-63. doi: 10.1016/j.ejrad.2008.07.044, PMID 18804932.
10. Ayhan A, Bukulmez O, Genc C, Karamursel BS, Ayhan A. Mature cystic teratomas of the ovary: case series from one institution over 34 years. Eur J Obstet Gynecol Reprod Biol. 2000 Feb 1;88(2):153-7. doi: 10.1016/s0301-2115(99)00141-4, PMID 10690674.

11. Goudeli C, Varytimiadi A, Koufopoulos N, Syrios J, Terzakis E. An ovarian mature cystic teratoma evolving in squamous cell carcinoma: A case report and review of the literature. Gynecol Oncol Rep. 2017 Feb 1;19:27-30. doi: 10.1016/j.gore.2016.12.005, PMID 28050596.
12. Gadducci A, Giuliani D, Cosio S, Lissoni A, Ferrero AM, Landoni F. Clinical outcome of patients with malignant tumors associated with mature cystic teratomas of the ovary: a retrospective multicenter Italian study. Anticancer Res. 2019 May 1;39(5):2513-7. doi: 10.21873/anticanres.13372, PMID 31092447.
13. Rathore R, Sharma S, Arora D. Clinicopathological evaluation of 223 cases of mature cystic teratoma, ovary: 25-year experience in a single tertiary care centre in India. J Clin Diagn Res. 2017 Apr;11(4):EC11-4. doi: 10.7860/JCDR/2017/23909.9612, PMID 28571142.
14. Anteby EY, Ron M, Revel A, Shimonovitz S, Ariel I, Hurwitz A. Germ cell tumors of the ovary arising after dermoid cyst resection: a long-term follow-up study. Obstet Gynecol. 1994 Apr 1;83(4):605-8. doi: 10.1097/00006250-199404000-00021, PMID 8134074.
15. Sinha A, Ewies AA. Ovarian mature cystic teratoma: challenges of surgical management. Obstet Gynecol Int. 2016 Mar 24;2016:2390178. doi: 10.1155/2016/2390178, PMID 27110246.
16. Ganer Herman H, Sagiv R, Raphaeli H, Kerner R, Keidar R, Bar J et al. Surgical treatment of mature cystic teratomas: A comparison of emergent and elective surgeries. J Obstet Gynaecol Res. 2017 Jan;43(1):190-5. doi: 10.1111/jog.13190, PMID 27935160.
17. Ahmed A, Lotfollahzadeh S. Cystic teratoma. InStatPearls. 2022 Jun 3. StatPearlsPublishing.
18. Dos Santos L, Mok E, Iasonos A, Park K, Soslow RA, Aghajanian C et al. Squamous cell carcinoma arising in mature cystic teratoma of the ovary: a case series and review of the literature. Gynecol Oncol. 2007 May 1;105(2):321-4. doi: 10.1016/j.ygyno.2006.12.008, PMID 17240432.
19. Templeman CL, Fallat ME, Lam AM, Perlman SE, Hertweck SP, O'Connor DM. Managing mature cystic teratomas of the ovary. Obstet Gynecol Surv. 2000 Dec 1;55(12):738-45. doi: 10.1097/00006254-200012000-00004, PMID 11128910.
20. Tehranian A, Ghahghaei-Nezamabadi A, Seifollahi A, Kasraei S, Dehghani-Nejad H, Maleki-Hajiagha A. Ovarian mature cystic teratoma with malignant transformation: two case reports. J Med Case Rep. 2021 Dec;15(1):23. doi: 10.1186/s13256-020-02594-4, PMID 33499917.
21. Rathore R, Sharma S, Agarwal S. Malignant transformation in mature cystic teratoma of the ovary: a retrospective study of eight cases and review of literature. Prz Menopauzalny. 2018 Jun 30;17(2):63-8. doi: 10.5114/pm.2018.77304, PMID 30150913.