



## Incidental Tubal Dermoid During Laparoscopic Hysterectomy for Uterine Fibroids: A Case Report

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### Abstract

Teratomas, originating from germ cells, are categorized into mature and immature types and are among the most common neoplasms in young individuals, more frequently affecting females than males. Ovarian teratomas account for 16-20% of all ovarian tumors, typically appearing in middle age. While mature ovarian teratomas are prevalent, tubal teratomas are exceedingly rare, with only 75 cases reported worldwide. This case report presents a 40-year-old female diagnosed with multiple uterine fibroids, who underwent a total laparoscopic hysterectomy. Incidentally, a tubal dermoid was discovered during the procedure. The surgery was completed successfully without any post-operative complications, highlighting the importance of thorough intraoperative assessment and the efficacy of laparoscopic hysterectomy in managing complex gynecological conditions.

**Keywords:** Outpatient Department (OPD); Teratomas

### Abbreviations

H&E: Hematoxylin and Eosin; HPE: Histopathological Examination; LSCS: Lower Segment Caesarean Section; MRI: Magnetic Resonance Imaging; OPD: Outpatient Department; TLH: Total Laparoscopic Hysterectomy

### Introduction

Teratomas are thought to originate in utero and consist of various types of tissue, such as hair, muscles, teeth, or bone. They typically form in the ovary, testicles, or coccyx and are derived from totipotent cells, including germ cells and embryonal cells. Teratomas of embryonic origin are congenital, while those of germ cell origin may or may not be congenital. This case report highlights an incidental finding of a tubal dermoid tumor in a patient with persistent multiple uterine fibroids requiring surgical removal.

### Background

Teratomas are tumors originating from germ cells, categorized into mature and immature types. They are common neoplasms in young individuals, more frequently affecting females than males. Ovarian teratomas account for 16-20% of all ovarian tumors and are usually noticed in middle age. Despite the prevalence of mature ovarian teratomas, tubal teratomas are extremely rare, with only

75 cases reported worldwide. This rarity underscores the importance of identifying and managing such incidental findings during routine surgical procedures.

### Case Report

A 40-year-old female reported to the Outpatient department (OPD) with complaint of lower abdominal pain and menorrhagia. Patient had history of multiple uterine fibroid in uterus and iron deficiency anaemia because of the menorrhagia. Surgical history included lower segment cesarean section (LSCS) and multiple uterine fibroids before 13 years. The patient was investigated with pelvic sonography and magnetic resonance imaging (MRI) of pelvis for the confirmation.

Sonography of pelvis was performed on 1<sup>st</sup> August, 2018, revealing bulky uterus with fibroids and left ovary with dermoid as seen in Figure 1. MRI was performed on 28<sup>th</sup> August, 2018, showed that the size of the uterus was 9.3 x 8.6 x 6.6 cm. The anterior, and posterior wall and fundus of the uterus had multiple subserosal fibroids. The wall of left ovary was thick (2.8 x 2.4 cm) had dermoid cyst.

The patient was advised for laparoscopic hysterectomy with bilateral salpingectomy and adnexal mass removal as the weight of uterus was more than 250 g.



Figure 1: Sonography of pelvis.

The patient underwent total laparoscopic hysterectomy at our centre on 26<sup>th</sup> November, 2018 for the surgery. The total hysterectomy was performed by making four incisions on abdomen (one 10 ml, the other 3 ports 5 mm width). During the procedure while ligating the left ovarian ligament, hair was noticed coming out of the left fallopian tube. The left fallopian tube was distended and was found heterogeneous in shape, then bilateral salpingectomy with the hysterectomy was performed and it was noticed that the patient is also having tubal dermoid. The left ovary was completely normal with no masses, so it was spared. The bulky uterus with multiple uterine fibroids were removed from left fallopian tube and were sent for histopathological examination (HPE) and with the help of vicryl, incisions were closed.

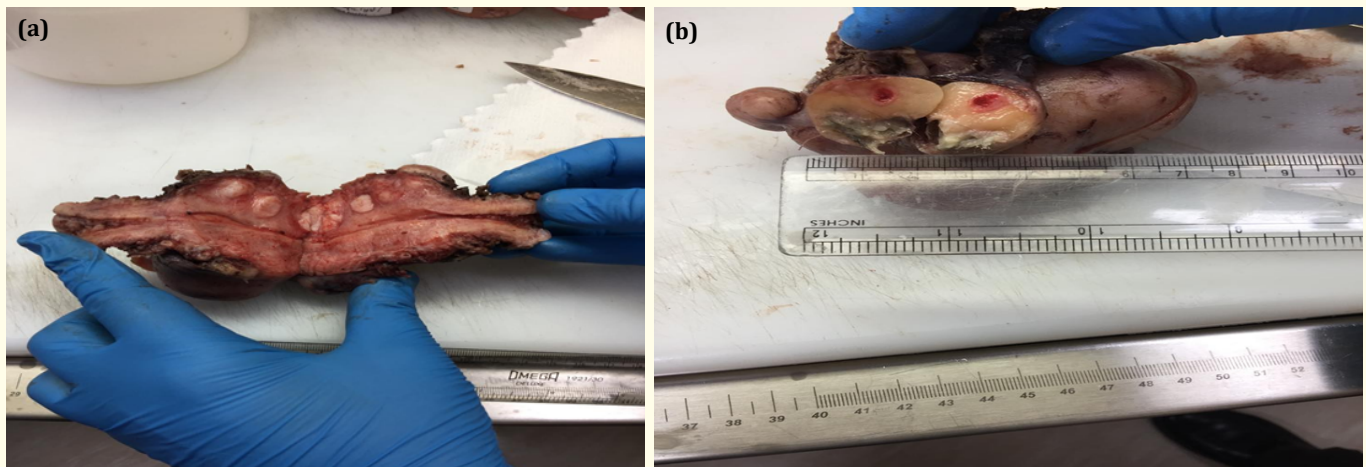
Intraoperative blood loss was 200 ml. Post-operatively, the patient remained stable. She was discharged home after 2 days of

post-operation on oral analgesics and antibiotics and was seen in the gynecology clinic one week post-operatively. All her wounds had healed satisfactorily, and she had no complaints.

Pathology confirmed that the size of uterus was 7.5x6x4cm with attached cervix measuring 2x3.5x1cm. The weight of cyst was 268g. The dissected specimen indicated unremarkable endometrial cavity with endometrial thickness is less than 0.3cm. There were multiple round to ovoid shaped fibroids seen in thick muscle wall as seen in Figure 2. Cut section of all fibroids were grey white with whorled appearance, measuring 2x1.6x1cm. The cut section of cystic mass was filled with adipose tissue and sebaceous secretions with presence of hairs as seen in Figure 3 (a) (b). Additionally one tiny, thin walled cyst filled with clear fluid was also seen attached at fimbrial end of left fallopian tube.



Figure 2: Round to ovoid shaped fibroids.



**Figure 3:** (a) (b): Cut section of cystic mass.

The microscopic examination revealed that hematoxylin and eosin (H&E) stained sections showed weekly proliferative endometrium with round to oval glands with focal apoptotic epithelium.

### Discussion

Steward., *et al.* [6] described that although uterine leiomyomas are frequent in women, fibroids > 50 cm in size, and because of the huge volume of the abdominal cavity, flexibility, and moderate growth rate of the tumor, it is realistic to expect benign tumors to outgrow silently without creating any noticeable symptoms [7]. In our present case, the weight of fibroids was 268g. According to Wattiez., *et al.* [9], uterine size (24 X 12 cm) should no longer be regarded as an absolute contraindication for TLH because most women with very enlarged uteri can still undergo the procedure successfully if their weight is between 500 and 1230 g. They examined a number of TLHs done on women who had uteri that were incredibly enlarged [9].

Preoperative imaging investigations are helpful in determining the tumor size and determining if it is likely to be malignant in cases of expansive or infiltrative growth. Ultrasonography is the preferred technique for the initial evaluation of gynecologic pathology because of its ubiquitous availability, noninvasiveness, and convenient cost-benefit ratio [10]. Lim., *et al.* [8] explained that fibroids of an enormous extent cannot be treated with the most widely used minimally invasive surgery techniques: hysteroscopic myomectomy, vaginal hysterectomy, or total laparoscopic hysterectomy (TLH)/laparoscopic-assisted supracervical hysterectomy (LASH). In our case study, because of the multiple uterine fibroids and the condition of both adnexa, and patient's age decision of total laparoscopic hysterectomy was taken. Advantages of the laparoscopic approach compared to open surgery include less intraoperative bleeding, shorter hospital stay, faster recovery and lower rates of wound and/or abdominal wall infections, at the expense of a longer surgery, but in cases with extremely large uteri, abdominal hysterectomy is typically preferable.

Wattiez., *et al.* [9] described that the rationale for total laparoscopic hysterectomy (TLH) was to convert abdominal hysterectomy

into a laparoscopic operation and to reduce trauma and morbidity. Today, TLH is regarded as a viable and secure alternative to traditional abdominal hysterectomy for the treatment of benign uterine disease because there is less intraoperative bleeding, shorter hospital stay, faster recovery and lower rates of wound and / or abdominal wall infections, at the expense of a longer surgery [11]. To make a uterus appropriate for laparoscopic surgery, the majority of research arbitrarily set a maximum uterine size of 15 to 16 weeks of gestation while in our case study, the maximum uterine size of 13 to 14 weeks of gestation. This suggests a laparotomic approach because of its size and weight. This is due to alleged technical challenges with laparoscopic hysterectomy (with increase in uterine volume access to uterine vascular pedicles deteriorates and the risk of consequences like hemorrhage rises). Other issues include the potential for unintentional bowel and bladder injury from inadequate exposure, the challenge of uterine extraction, and the length of the process [11]. The study by Fiaccavento., *et al.* [12] reported that women with much-enlarged uteri had operations that took significantly longer than those with smaller uteri. The groups did not differ in terms of the hemoglobin level drop, hospital stay, or whether conversion to laparotomy was necessary in either group. To guarantee optimal exposure of the surgical site and a more efficient and secure excision of the uterine vascular pedicle, several surgical procedures must be carried out while in our study the weight of the uterus was 268 g and hemoglobin level after the surgery didn't drop. This indicates that laparoscopy should be explored when the vaginal route is contraindicated as well as in cases with big uteri.

The majority of tubal mature teratomas are discovered by chance during routine examinations or pelvic surgery, and, as in our case, tubal teratomas are frequently mistaken as ovarian teratomas during physical examinations before surgery. When a pelvic mass thought to be a teratoma is discovered, the possibility of a tubal teratoma should be taken into urgent consideration. Despite the rarity of tubal teratomas, it is nonetheless important to be aware of their existence. Because tubal teratomas are frequently mistaken for ovarian teratomas in radiologic investigations, pathologists must specifically take the potential of a tubal teratoma into account when the origin of an adnexal mass is seriously uncertain.

According to Kaya, *et al.* [13], growing older was a risk factor that was independent of other factors for intraoperative problems. Women older than 38 years were more likely to experience intraoperative problems. Considering the overall higher occurrence of comorbidities with advancing age, older age may be a substantial risk factor in this situation while in our present study, the findings reveals that increasing age is one of the risk factor for intraoperative complication for multiple uterine fibroids.

Donnez and Dolmans [14] discussed in their research that many gynecological surgeons believe TLH to be more challenging, yet the benefits are real as there are less serious post-operative complications of multiple uterine fibroids along with quicker recovery and no appreciable difference in reproductive results. In our case study, laparoscopic operations has proved that TLH has less post-operative complications of multiple uterine fibroids.

### Conclusion

Diagnostic elaboration is necessary since menstrual illnesses can have a variety of diagnoses and can have both organic and non-organic causes. To avoid a delay in the detection and treatment of curable causes such uterine fibroids, general practitioners should use physical and ultrasound tests as diagnosis procedure. Identifying and treating multiple uterine fibroids remains difficult and calls for interdisciplinary collaboration and specialized knowledge. With the right diagnosis and surgical skill, even enormous benign tumors can be treated through total hysterectomy without any complications.

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