

# Laparoscopic Scar – Laparoscopic Tubal Ligation: A Rare Case Report

R.K. TANDON, S.P. PANDYA, DIMPLE DARAD, ASHIMA CHUGH, KAUSHIK BHUVA

## ABSTRACT

When the endometrium is located outside its normal location, the condition is called endometriosis. Scar endometriosis (IE) is a rare entity which is reported in 0.03%-1.08% of the women following obstetric or gynaecological surgeries. Post salpingectomy endometriosis is documented in 20–50% of the tubes which are examined after ligation. The diagnosis is frequently made only after the excision of the lesion and after doing histopathological studies on it. We are presenting a case

of a 42-years old woman who had undergone laparoscopic tubal ligation four years back and had complained of cyclic pain during menstruation. On examination, a firm nodule was found, which measured 3x4cm in size, at the laparoscopic tubal ligation site, that became spontaneously painful during menstrual bleeding. The USG report suggested a desmoid tumour. The nodule was excised and it was sent for a histopathological examination, which confirmed the diagnosis.

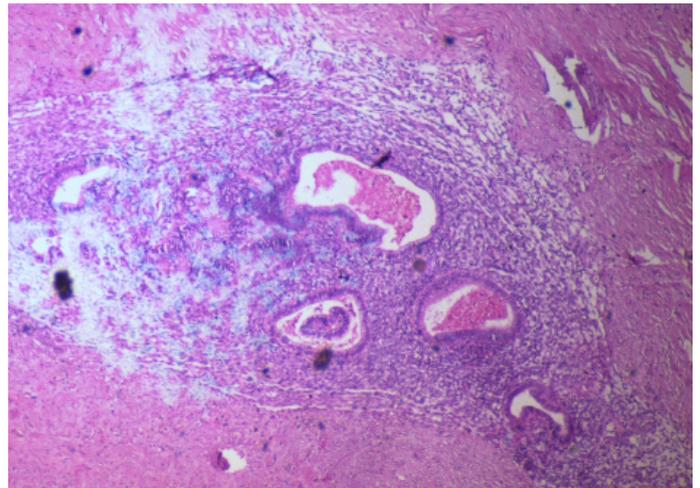
**Key Words:** Scar endometriosis, laparoscopic tubal ligation, Post salpingectomy endometriosis

## INTRODUCTION

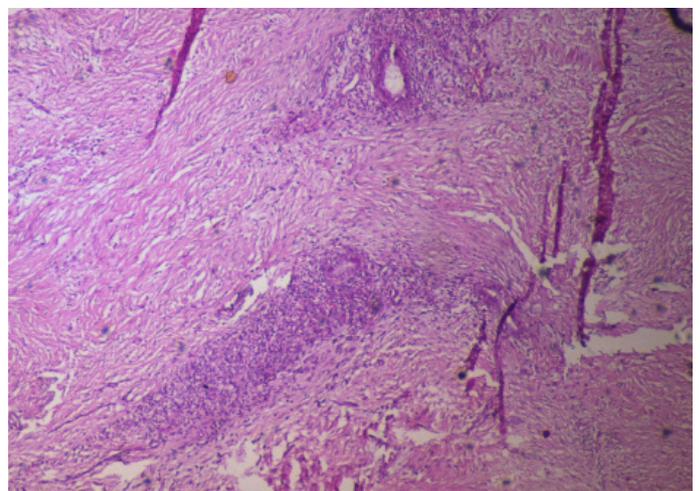
Endometriosis was first described by Rokitansky in 1860. It is defined as the presence of a functioning endometrium outside the uterus. It occurs in 8%-15% of women of the reproductive age group. Post-salpingectomy endometriosis is usually noted at the tip of the proximal stump, 1-4 years after a tubal ligation. It constitutes around 20%-50% of the cases which are examined after a tubal ligation. The chances of this to be detected are higher, especially if electrocautery is used in tubectomy, if the proximal stump is short and if the post-ligation interval is long. It usually produces firm, palpable nodules which must be evaluated and differentiated from other benign and malignant abdominal wall tumours. The most common locations of abdominal wall endometriomas are old surgical scars from obstetric or gynaecological procedures. Scar endometriosis presents clinically as a painful, palpable subcutaneous mass which is associated with cramps and bloating during menses. It is easily confused with other conditions such as desmoid tumours, keloids, haematomas, stitch granulomas, abscesses and inguinal and incisional hernias. For the confirmation of the diagnosis, a histopathological examination is usually done. The treatment of endometriosis is medical (contraceptive pills, Danazol) or surgical (laparoscopy and laser surgical resection).

## CASE REPORT

A 42-years-old lady came to the surgery OPD and complained of cyclic pain during menstruation. On examination, a firm, soft, mobile nodule was found, which measured 3x4cm in size, at the laparoscopic tubal ligation site. She complained that the nodule became spontaneously painful during menstrual bleeding. The USG report suggested a desmoid tumour. The surgeons excised that nodule and sent it for histopathological examination. A skin covered soft tissue mass was received, which measured 8x6x4cms. The outer surface was smooth.



**[Table/Fig-1]:** The section shows histomorphology of distended endometrial glands, endometrial stroma & fibrous tissue. (H & E , 10X)



**[Table/Fig-2]:** The section shows histomorphology of endometrial glands, endometrial stroma. Hemosiderin pigment laden macrophages & few chronic inflammatory cells are also seen. (H & E , 10 X)

## HISTOPATHOLOGY REPORT

The histopathology report showed the histomorphology of the skin and the fibrous tissue, with the underlying presence of endometriosis, which showed distended endometrial glands, endometrial stroma and areas of haemorrhage. Haemosiderin pigment laden macrophages and few chronic inflammatory cells were also seen.

## DISCUSSION

Scar endometriosis most commonly occurs after an operation of the uterus and the tubes. The gynaecological operative procedures like laprotomy/caesarean sections/episiotomy carry the risk of triggering the appearance of endometrial tissue in the operative scar tissue. The aetiology of abdominal wall endometriosis is thought to be a result of the transportation of endometrial tissue during surgical procedures and to be subsequently stimulated by oestrogen to produce endometriomas. Review of the surgical literature indicates that a preoperative diagnosis is often incorrect [1,2]. Sampson had claimed that after partial salpingectomy for sterilization, the tubal epithelium had sprouted from the cut ends and invaded the surrounding tissues. This misplaced tubal epithelium had retained its original structure (endosalpingiosis) or it had undergone metaplasia (endometriosis) [3, 4, 5]. This concept of post-salpingectomy endosalpingiosis or endometriosis has been challenged by Stock. He concluded that endosalpingeal endometriosis of the proximal stump was due to a repeated menstrual reflux rather than metaplasia of the seeded or the invading tubal mucosa [6, 7].

Rock JA et al studied details of the gross and the histological findings of 79 previously ligated fallopian tubes from 3 groups of patients. Of the 20 tubes which were removed after documented sterilization failure, 6 showed endometriosis [8]. 4 of 9 previously ligated tubes, were injected with ink; 2 patients showed ink in the epithelium-lined spaces, beyond the muscle of the tubal wall,

from the tubal lumen to the serosal surface. Laparoscopic cautery sterilizations had shown higher percentages of fistula formation and endometriosis at the sterilization site than sterilizations by other methods had shown. Therefore, ligation of the fallopian tube within 4cm of the uterine cornu may predispose the development of endometriosis and subsequent fistula formation at the tip of the ligated tube.

To conclude, one should be suspicious of scar endometriosis when women present with a painful swelling in the abdominal scar and give a history of previous gynaecological or obstetrical surgery. Since the fallopian tube is not sampled extensively during the routine processing of the hysterectomy specimens, there are chances of missing the variations in the morphology of the fallopian tube and hence, they are under-reported. Therefore, the pathologists should be aware of such morphological aberrations in the fallopian tube.

## REFERENCES

- [1] Roberge RJ, Kantor WJ, Scorza L. Rectus abdominis endometrioma. *Am J Emerg Med* 1999; 17(7): 675-77(s).
- [2] Khetan N, Torkington J, Watkin A, Jamison MH, Humphreys WV. Endometriosis: a presentation to general surgeons. *Ann R Coll Surg Engl* 1999; 81: 255-59(s).
- [3] Sampson JA. Endometriosis following salpingectomy. *Am J Obstet Gynaecol.* 1928; 16:461-99.
- [4] Sampson JA. Post salpingectomy endometriosis (endosalpingiosis) *Am J Obstet Gynaecol.* 1930; 20: 443-80.
- [5] Sampson JA. Pathogenesis of post salpingectomy endometriosis in laparotomy scars. *Am J Obstet Gynaecol.* 1945;50:597-20.
- [6] Stock RJ. Postsalpingectomy endometriosis: A reassessment. *Obstet Gynaecol.* 1982; 60:560-70.
- [7] Catalina-Fernandez I, Lopez-Presa D, Saenz-Santamaria J. Fine needle aspiration cytology in cutaneous and subcutaneous endometritis. *Acta Cytolo* 2007; 51: 380-84.
- [8] Stock RJ. Histopathologic changes in the fallopian tubes which are subsequent to sterilisation procedures. *Int J Gynaecol Pathol.* 1983;2:13-27.

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