

## RIGHT AMPULLARY ECTOPIC PREGNANCY FOLLOWING BILATERAL TUBAL LIGATION USING SPRING CLIPS

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### ABSTRACT

**Pregnancy is unlikely to occur in women who have undergone sterilization. However when it occurs, there is a substantial risk that it will be an ectopic pregnancy. We report a case of right unruptured ampullary ectopic gestation following tubal sterilization with spring clips 6 years prior to presentation. The likely aetiology may be spontaneous reanastomosis.**

**Keywords:** Ectopic, Bilateral Tubal ligation, Spring Clips.

### INTRODUCTION.

Tubal sterilization is highly effective but can fail. Available evidence suggests that sterilization fails in 0.13-1.3% of sterilization procedures and of these, 15-33% will be ectopic pregnancies.<sup>1</sup>

### CASE REPORT

In August, 2011, a 35 year old woman, gravida 5, para 3<sup>+1</sup> (4 alive) presented at the gynaecology clinic with a complaint of lower abdominal pain of 1 week duration and bleeding per vagina of 3 days duration. The abdominal pain was of sudden onset, localized to the right lower quadrant, intermittent and of dull intensity. The bleeding was irregular, moderate with passage of minimal blood clots. She was unsure of her last menstrual period and denied missing any period.

She had 3 previous caesarean sections in 2000, 2002 and 2005 respectively. A bilateral tubal ligation was done in 2005 using spring clips at caesarean section. There was no history of intercurrent medical illness. Examination revealed a young lady, in stable clinical condition. She was neither pale nor icteric. Her pulse rate was 84 beats per min and blood pressure was 110/80 mmhg. Abdominal examination revealed right iliac fossa tenderness with significant rebound tenderness. There was an old pfannestiel scar from previous surgeries.

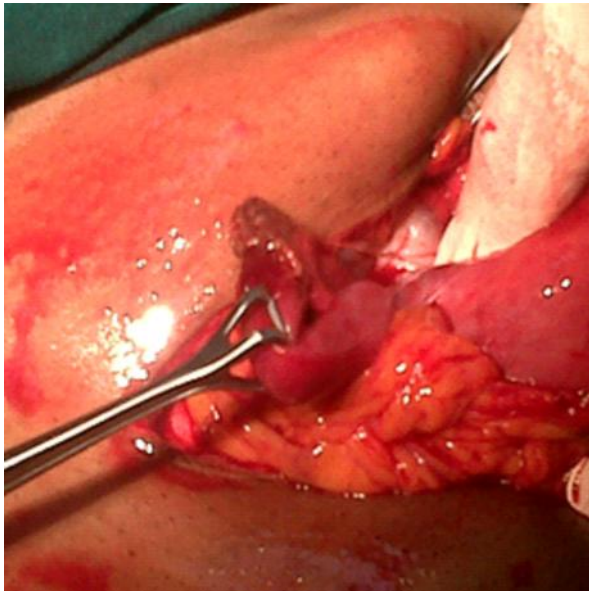
A vaginal examination revealed a posterior, soft cervix with a closed external os. There was marked cervical excitation tenderness on the right. The uterus was marginally bulky measuring about 12 week's size. The pouch of douglas was flat and tender.

A blood pregnancy test done was positive and a pelvic scan revealed an anteverted bulky uterus measuring AP 47mm and LS 116mm. The endometrial stripe was thickened measuring 8.9mm with no defined intra-uterine gestational sac. There was a complex echogenic mass seen in the Pouch of Douglas. The left ovary had a solitary, simple cyst measuring 68 x 52mm. Her packed cell volume was 34%, Retroviral screening for HIV 1 & 2 was non-reactive and urinalysis was essentially normal.

A diagnosis of right unruptured ectopic gestation was made and she was counseled for exploratory



**Fig.1.** The uterus and left tube with a spring clip at the isthmic end.



**Fig.2.** Unruptured right ampullary ectopic gestation

laparotomy. Consent was obtained for right total salpingectomy, repeat left tubal ligation and ovarian cystectomy.

She had exploratory laparotomy and intra-operative findings were: right unruptured ampullary ectopic gestation, normal looking right ovary, left simple ovarian cyst measuring about 70 x 60 mm, bilateral spring clips at the isthmus of both tubes. A right total salpingectomy was done; repeat left tubal ligation using the Pomeroy technique was carried out alongside left ovarian cystectomy.



**Fig. 3.** Distended right tube and normal right ovary



**Fig.4.** The left tube and cystic left ovary

Her post operative condition was satisfactory and she was discharged on the 3<sup>rd</sup> post operative day on antibiotics and analgesics. Her packed cell volume on discharge was 33%. She was seen for follow up 1 week after the surgery. A review of the procedure was done with the couple and she was discharged from follow up.

## DISCUSSION

The incidence of sterilization failure has been estimated to be about 0.13-1.3% of which ectopic gestation constitute about one third.<sup>1</sup> Tubal recanalization, cornual and tuboperitoneal fistula formation are the main causes. The sterilization failure risk persists for years after the procedure and varies by operator technique, method of tubal occlusion and female age.<sup>2</sup> Operator failure may occur when the occluding device is placed on the round ligaments. This however was not the case here as the spring clips were found to be well applied at the isthmus ends of both tubes; spontaneous recanalization the plausible aetiology.

Ectopic pregnancy after tubal sterilization is not rare, particularly among women sterilized before the age of thirty.<sup>3</sup> This patient was twenty nine years old at the time of tubal sterilization. The choice of spring clips may have been influenced by the young age of the patient, relative ease of reversal and the remote possibility of post tubal ligation regret. Women who had postpartum sterilization were found to be forty percent more likely to have regrets than women having the sterilization at a time separate from pregnancy.<sup>4</sup> Hence the need to deploy readily reversible methods for young patients demanding postpartum sterilization.

The Spring clip or Hulka clip was developed in Chapel hill, North Carolina by Jaroslav Hulka. It is usually placed across the narrow isthmus segment of the fallopian tube. Because of its narrow width (7mm), the tubal clip damages the least amount of fallopian tube in comparison with other tubal ligation methods.

A comparison of ectopic gestation in sterilized and nonsterilized women revealed similar clinical manifestation and surgical outcome.<sup>5</sup> However; sterilized patients were less likely than nonsterilized controls to have had serial hCG estimation, while their mean duration of symptoms at admission was shorter.<sup>5</sup> The diagnosis here was based on complaints of lower abdominal pain, bleeding per vagina, positive pregnancy test and ultrasonographic findings of an empty uterus with an echogenic mass in the pouch of Douglas.

There is a trend towards more frequent rupture and hemoperitoneum in sterilized patients who are less likely to heed the early warnings of ectopic gestation.<sup>5</sup> This however was not the case here.

There is very little information in the literature as to what is most appropriate for patients when sterilization fails.<sup>1</sup> However it has been suggested that bilateral salpingectomy should be performed when exploring a patient with ectopic gestation after sterilization.<sup>6</sup> A right total salpingectomy was performed on the right tube due to the extensive destruction by the ectopic gestation. A repeat left tubal ligation was done using the Pomeroy method (partial salpingectomy) on account of completed family size, safety and very low risk for ectopic gestation in comparison with the clip. A left ovarian cystectomy was performed due to the size of the cyst and the possibility of a future acute abdomen arising from torsion of the cyst.

## CONCLUSION

Tubal sterilization is highly effective but can fail. Ectopic gestation after tubal sterilization in women before age thirty is not particularly rare. All women undergoing this procedure should be informed that ectopic

pregnancy may occur long after the sterilization.<sup>7</sup> This reflects the importance of previous sterilization as an aetiological risk factor for ectopic gestation.<sup>8</sup>

There is very little information in the literature as to what is most appropriate for patients when sterilization fails. Hence counseling about possible sterilization failure and contraceptive alternatives in the event of failure is imperative especially in patients who are below 30 years at the time of the procedure.

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