

# FERTILITY SPARING SURGERY FOR PAEDIATRIC OVARIAN TERATOMA

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## INTRODUCTION

Paediatric ovarian tumours are rare. The non-neoplastic type cystic lesions are generally benign in nature and minimalist management is sufficient<sup>1</sup>. However, the majority of ovarian lesions are germ cell line in origin and mature teratoma is the commonest, followed by immature teratoma<sup>2</sup>. These types of lesions require surgical intervention<sup>1,2,3</sup>. Prognosis is good following complete resection. Oophorectomy ensures no remnant of the tumour post resection but ovarian sparing surgery offers the benefit of preserving future female fertility, hormonal and psychological health<sup>3</sup>.

## CASE SUMMARY

9-year-old, girl, pre pubertal presented with worsening lower abdominal distention for the past 2 months. She denies any discomfort, gastrointestinal problems or weight loss. Clinically, there is a huge mobile mass palpable at left lower abdomen. It was non tender, firm, smooth surface with no overlying skin changes. Ultrasound abdomen reveals an adnexal solid cystic mass measuring 8.0 x 9.3 cm arising from left ovary and right ovary was normal. Her alpha fetoprotein level was less than 2.0ng/mL.

Emergency laparotomy and sparing excision of left ovarian mass was performed. Tumour enucleated from left ovary in one piece together with its capsule with no spillage and no obvious remnant of tumour seen.

She recovered well and was discharged home at day 3 post operative. Histopathological examination came back as immature ovarian teratoma. She was co managed together with the Paediatric Hematooncolgy team and was started on chemotherapy.

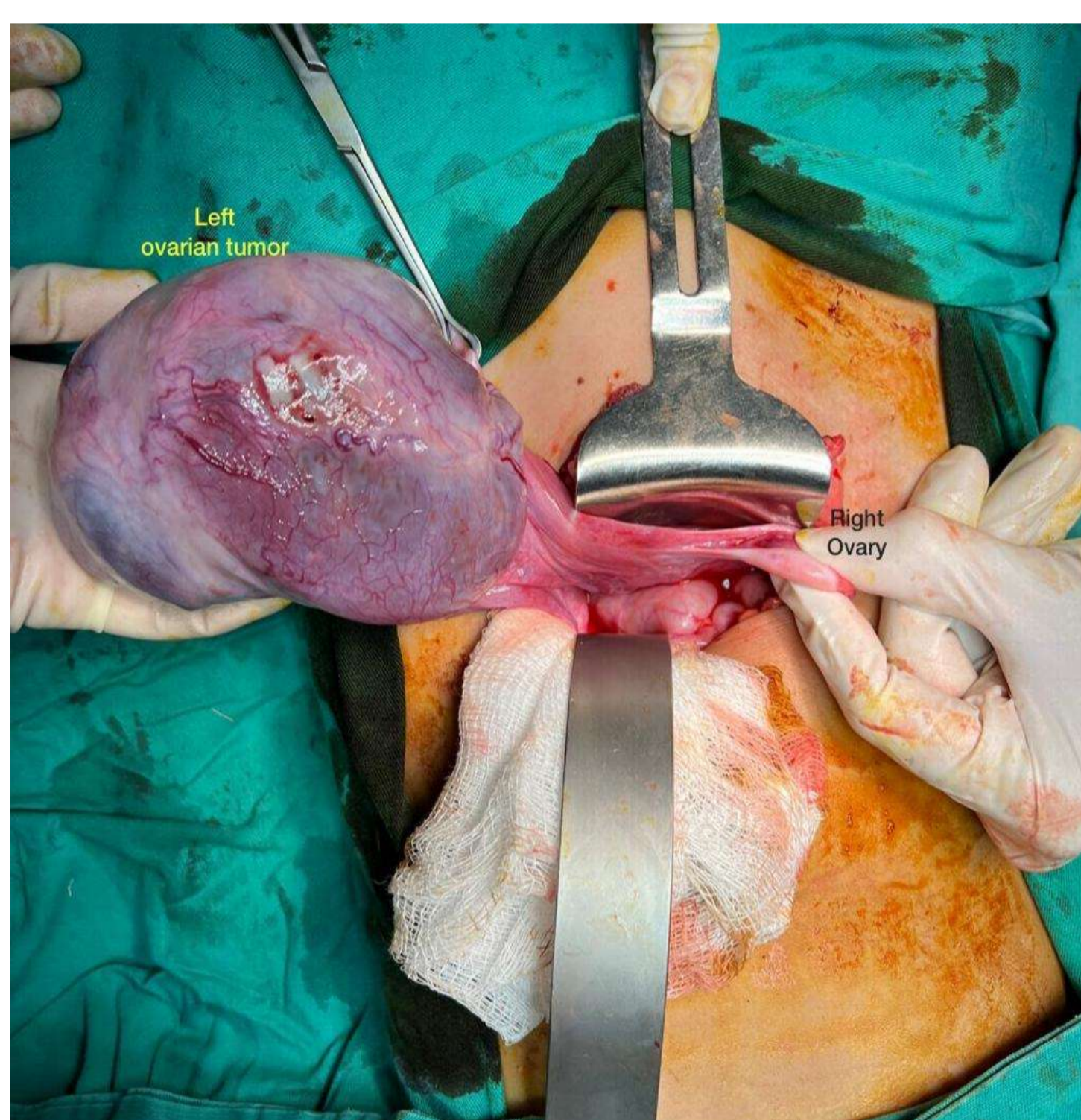


Figure 1: left ovarian mass compared to right ovary

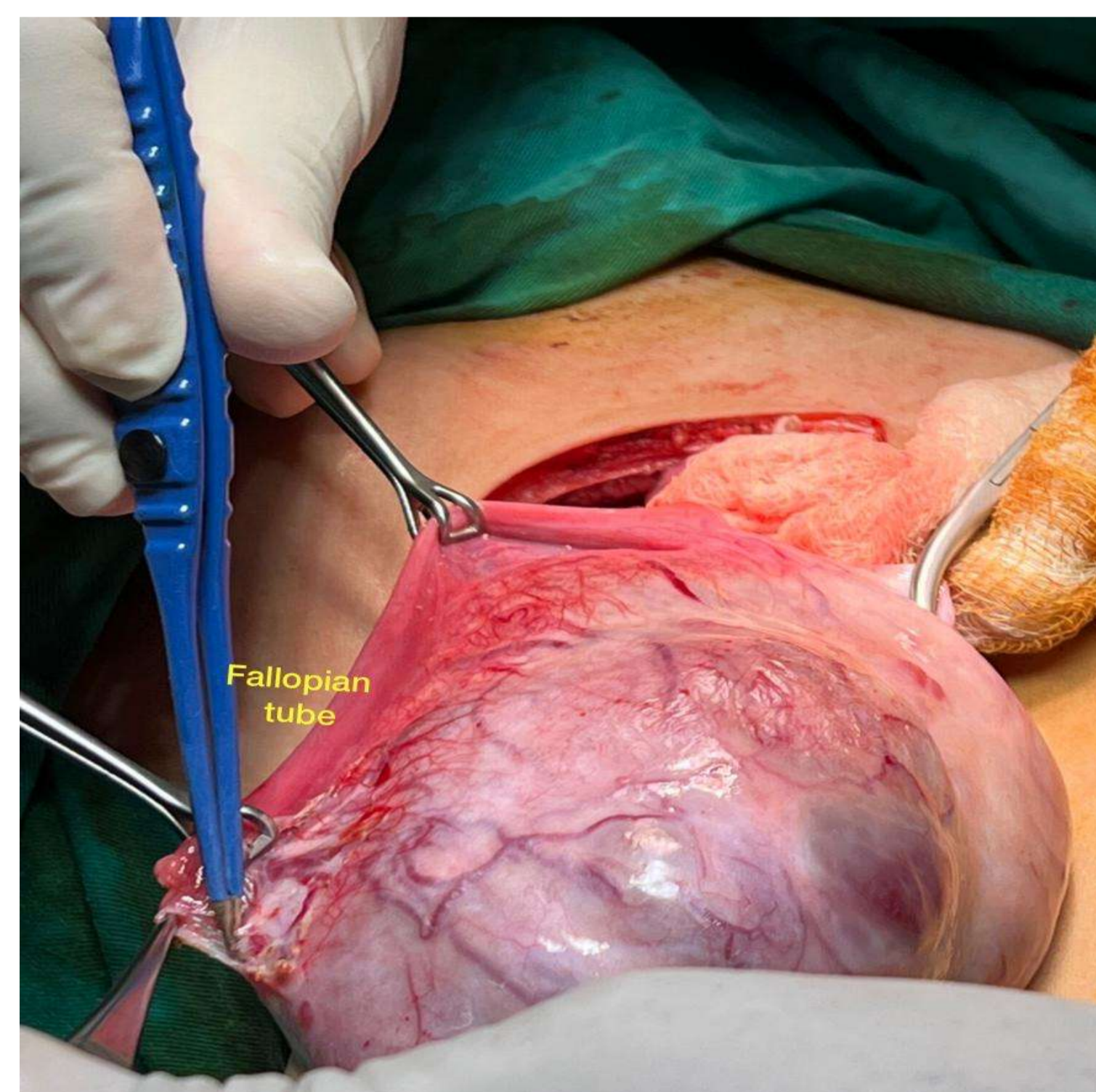


Figure 2: Mobilisation of left ovarian mass from Fallopian tube

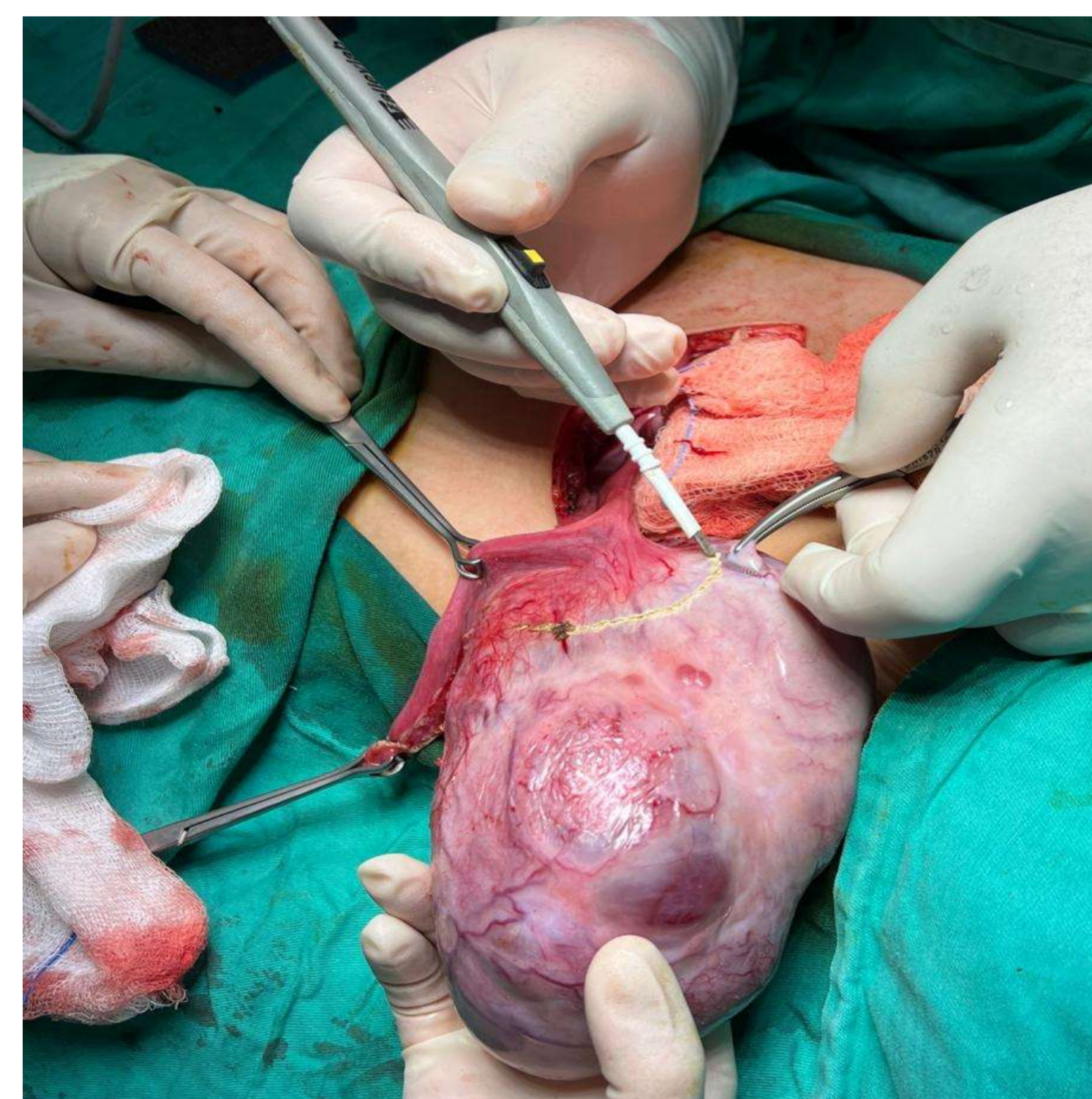


Figure 3: Preserving normal left ovarian tissue

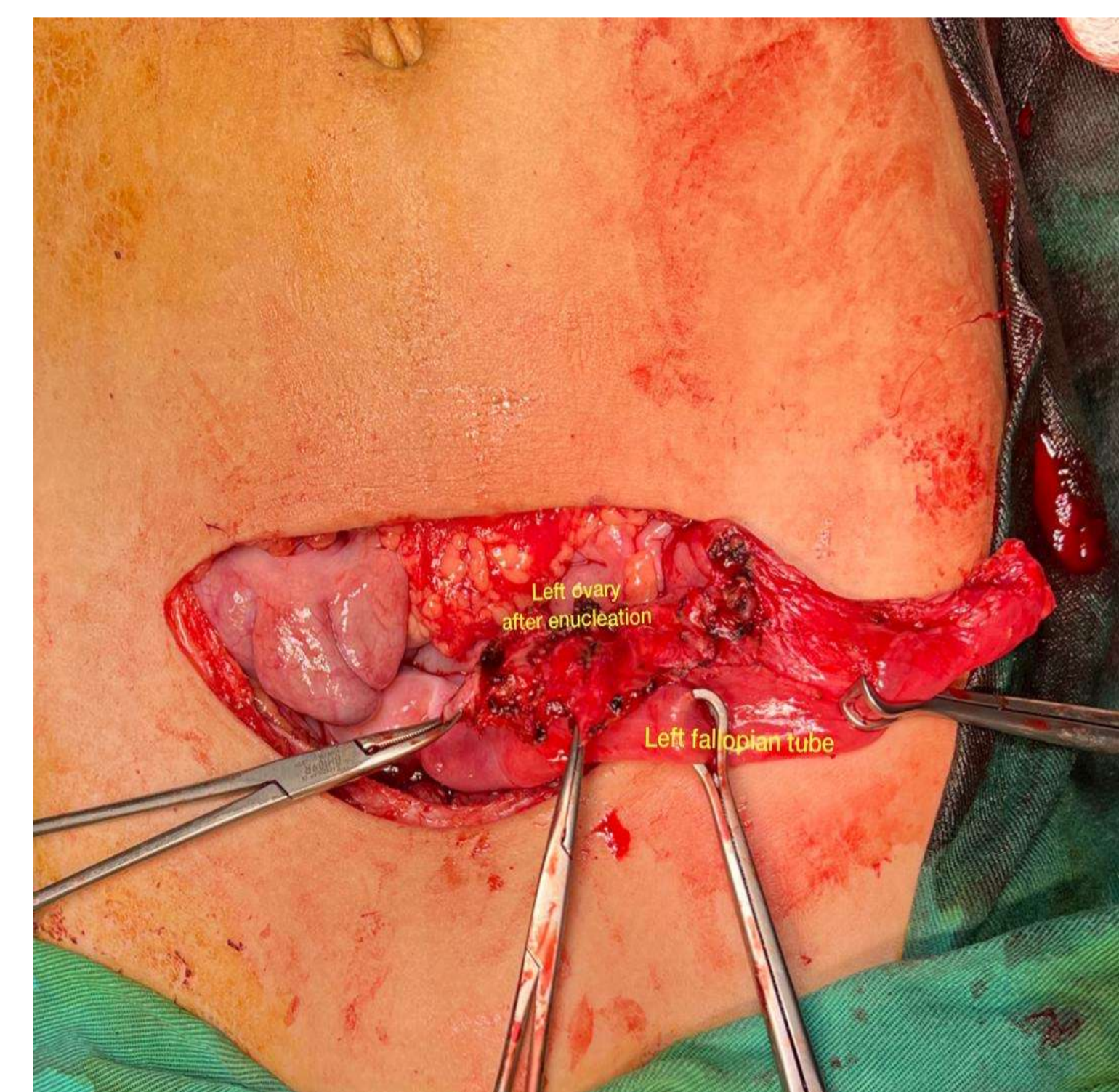


Figure 4: Left ovary closed with absorbable suture.

## DISCUSSION

Paediatric surgeons are special breeds. Operating into the unknown of the future thus lied the great responsibilities to preserve the human anatomy as normal as possible. The debate between oophorectomy and ovarian sparing surgery is a long standing question with no definite answer<sup>3</sup>. However in a recent large population based cohort study, oophorectomy has a significant negative effects on women fertility, hormonal and psychological health<sup>4</sup>.

Woman with unilateral or bilateral oophorectomies has increased risk for premature ovarian failure and early menopause which in turn will increase the risk for osteoporosis<sup>7</sup>. Lack of oestrogen increases the risk for cardiovascular disease<sup>7,8</sup>. On top of that, oophorectomy has also been associated with risk of dementia and Parkinson's disease<sup>5</sup>.

In order to minimise all of these complications, preservation of healthy ovarian tissue is a must. No single best approach is recommended<sup>3</sup>. However, minimal invasive surgery offers reduced postoperative morbidity, admission time and recovery time compared with open surgery. In a case of large ovarian cystic lesions, the benefits are doubtful since a large incision may be needed to deliver the tumour<sup>9</sup>. It should be noted also there is a very minimal evidence of chemical peritonitis as a consequence of tumour spillage intraoperatively<sup>3</sup>.

In managing paediatric population, one should remember they are not young adults and life expectancy also should be taken into considerations. By preservation of hormonal function of the ovary, we are reducing the risk of future complications and at the same time giving them the opportunity to enjoy a better quality of life.

Complete excision of tumor from healthy ovarian tissue is crucial to prevent relapsed. Nevertheless relapse is still possible if there is a microscopic remnant thus subsequent follow up to review the histopathological result and tumor markers are mandatory<sup>2</sup>. No evidence regarding duration of follow up but a long term follow up is recommended to detect any recurrences<sup>2</sup>.

## CONCLUSION

Although ovarian sparing surgery is surgically more challenging, preservation of the ovary for its hormonal and fertility function are invaluable especially in paediatric patient.

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