

Lee-Huang optical entry and in-bag enucleation: A safe approach to laparoscopic ovarian cystectomy in pregnancy

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ABSTRACT

Introduction: Laparoscopic management of adnexal masses during pregnancy poses a unique challenge due to the anatomical and physiological changes of gestation. Ensuring maternal and fetal safety while minimising surgical risks is paramount. The Lee-Huang entry technique reduces the risk of uterine injury during laparoscopic access, and in-bag enucleation allows safe cyst removal and reduces the risk of chemical peritonitis from spillage. **Case Description:** A 35-year-old G2P1 was found to have an incidental right ovarian cyst since her first pregnancy. Follow-up sonography confirmed the presence of a 6.4 cm right ovarian cyst, characterised by diffuse bright echoes and hyperechoic lines and dots, suggestive of a teratomatous lesion. A laparoscopic ovarian cystectomy was safely performed at 15 weeks of gestation using optical entry at the Lee-Huang point to avoid uterine injury. The cyst was removed “in-bag” without spillage, and the rectus sheath was closed with a suture passer to prevent port hernia. The one-hour procedure had minimal blood loss and no complications. Histology confirmed a mature cystic teratoma. Postoperative recovery was uneventful, with no signs of preterm labour, and the pregnancy progressed without complications. **Discussion:** By integrating Lee-Huang entry with in-bag enucleation, this technique offers an innovative and efficient solution that reduces surgical risks and enhances maternal-fetal safety during laparoscopic cystectomy in pregnancy.