When Beauty Meets Risk: Laparoscopic Challenges in Ectopic Pregnancy Post-Abdominoplasty

Abstract

Ectopic pregnancy is the foremost cause of maternal morbidity and mortality in the first trimester—and the clinical picture becomes even more complex in women with a history of abdominal surgeries. Among these, abdominoplasty, a widely performed cosmetic procedure, introduces distinct anatomical and physiological alterations that can obscure diagnosis and complicate management. We report a rare and thought-provoking case of ectopic pregnancy following abdominoplasty, emphasizing the atypical clinical presentation, diagnostic dilemmas, and tailored management strategies. This case underscores the need for heightened clinical vigilance and a nuanced approach in managing early pregnancy complications in post-abdominoplasty patients.

Introduction

Ectopic pregnancy—defined as the implantation of a fertilized ovum outside the endometrial cavity—remains a critical obstetric emergency, responsible for significant morbidity and mortality in the first trimester if not promptly recognized and managed (Elson et al., 2016). Known risk factors include previous ectopic pregnancy, pelvic inflammatory disease, intrauterine device use, assisted reproductive technology, and prior pelvic surgeries. Once diagnosed, management options range from conservative medical therapy to urgent surgical intervention, guided by the ectopic location, gestational age, and sac size (Mullany et al., 2023).

While abdominoplasty, a commonly performed cosmetic procedure, is not traditionally associated with ectopic pregnancy risk, its impact on abdominal wall structure, pelvic anatomy, and vascular supply may introduce unexpected complexity in both diagnosis and treatment. Altered anatomical landmarks and post-surgical adhesions can obscure clinical signs and complicate surgical access.

This case report explores a rare intersection of aesthetic surgery and obstetric emergency—a patient presenting with ectopic pregnancy following prior abdominoplasty. We examine the diagnostic hurdles, intraoperative challenges, and strategic considerations for safe and effective management, offering practical insights for clinicians facing similar scenarios.

Case Presentation

A 40-year-old multiparous woman (G6P5) presented to the emergency department with a four-day history of progressive abdominal pain, accompanied by nausea and vomiting. The pain initially began in the left lower quadrant and gradually radiated across to the right lower quadrant. She reported her last menstrual period as four weeks prior and was unaware of her pregnancy.

Her obstetric history included one cesarean section followed by four spontaneous vaginal deliveries, the last occurring five years ago. She had an intrauterine contraceptive device (IUCD) in place for the past four years and had undergone an elective abdominoplasty three years prior, with no reported postoperative complications.

On examination, her abdominal anatomy was notably altered, with a distorted umbilical position suggestive of prior surgical modification. Localized tenderness was elicited in the left lower quadrant, radiating to the suprapubic and right lower quadrants, with marked rebound tenderness.

Transvaginal ultrasound revealed a viable left tubal ectopic pregnancy at approximately 6 weeks gestation with detectable cardiac activity. The IUCD was visualized in the empty uterine cavity, and no free fluid was identified in the pouch of Douglas at the time of scanning. Her serum β-hCG level was 9200 mIU/mL—exceeding the typical threshold for safe medical management. A diagnosis of tubal ectopic pregnancy was confirmed, and a decision was made to proceed with laparoscopic surgical intervention.

Surgical Challenges and Management

Preoperative Planning

During preoperative counseling, the patient and her husband expressed their desire for bilateral salpingectomy, as they had completed their family. They also requested removal of the IUCD. Informed consent was obtained for laparoscopic left and right salpingectomy, with intraoperative removal of the device.

Intraoperative Approach

Due to her surgical history—including prior cesarean section and abdominoplasty—a Palmer's point entry was selected. A nasogastric tube was inserted for gastric decompression. Pneumoperitoneum was established at 20 mmHg using a Veress needle through a left upper quadrant entry, with an initial 5 mm port. Upon visual confirmation, a 2 cm supraumbilical skin incision was made to accommodate an 11 mm balloon-tipped trocar under direct vision, followed by placement of two 5 mm working ports in the right and left iliac fossae.

Intraoperative findings included a ventroflexed uterus tethered by dense anterior adhesions from the uterus to the abdominal wall, limiting mobility. Additional filmy adhesions between the omentum and anterior abdominal wall obscured pelvic visualization. These adhesions were carefully lysed using an advanced bipolar energy device (Enseal).

There was a moderate hemoperitoneum with visible blood clots in the pouch of Douglas. A large left ampullary ectopic pregnancy was identified, leaking from the fimbrial end but still

largely intact. The right fallopian tube appeared macroscopically normal, with minor filmy adhesions to the lateral pelvic wall.

Surgical Procedure

A left salpingectomy was performed using the Enseal device, followed by right salpingectomy. The IUCD was subsequently removed transvaginally. Hemostasis was achieved with minimal blood loss, and no intraoperative complications were encountered.

Postoperative Course

The patient made an excellent recovery with no complications. She was discharged in stable condition on postoperative day two. Comprehensive counseling was provided on the potential risks of future pelvic surgeries, given her complex surgical history, and the importance of early antenatal assessment should she ever conceive again.

Discussion

This case underscores a critical, yet often overlooked, intersection between cosmetic surgery and emergency gynecologic care. While abdominoplasty is typically regarded as a superficial procedure with limited impact on internal structures, its implications on future intra-abdominal interventions are far from trivial. The anatomical disruption, fascial remodeling, and neovascularization that follow abdominoplasty can result in significant scarring, altered tissue planes, and unexpected adhesive disease—all of which can profoundly complicate surgical access and decision-making during acute presentations like ectopic pregnancy.

The surgical challenges in such patients are multifaceted. Adhesions between the anterior abdominal wall and pelvic organs, distortion of natural landmarks, and reduced abdominal compliance may hinder safe laparoscopic access and obscure pelvic visualization. In this context, the traditional use of the umbilicus as the primary laparoscopic entry site becomes a potential liability. Though it is typically favored due to its avascular midline position and ease of access, previous surgical manipulation of this area—particularly during cosmetic procedures like abdominoplasty—can significantly increase the risk of injury to adherent bowel or vascular structures.

This case supports growing advocacy for alternative laparoscopic entry techniques in patients with prior abdominal surgery. Palmer’s point, located in the left upper quadrant, has emerged as a safe and effective alternative for establishing pneumoperitoneum in such patients. Its distance from the midline, reduced risk of adhesions, and lack of major vascular structures make it an ideal entry point in cases where traditional routes pose significant risks [7].

Although ectopic pregnancy following abdominoplasty remains rare, this case highlights the importance of heightened clinical vigilance and surgical preparedness. With abdominoplasty

becoming increasingly popular among women of reproductive age, clinicians must remain alert to its potential impact on future pregnancies—both in terms of implantation dynamics and operative management. Early recognition, individualized surgical planning, and familiarity with alternative access techniques are essential to optimizing outcomes in this unique and growing patient population.

Conclusion

As cosmetic abdominal procedures become increasingly common among women of reproductive age, clinicians must remain vigilant to the potential implications of abdominoplasty on future pregnancies—particularly ectopic implantation. In patients presenting with early pregnancy-related symptoms, a high index of suspicion for ectopic pregnancy is essential, especially when standard diagnostic pathways may be obscured by altered anatomy.

This case highlights the critical importance of preoperative planning and surgical adaptability. Awareness of potential challenges—such as intra-abdominal adhesions, distorted anatomical landmarks, and restricted laparoscopic access—is key to ensuring safe and effective intervention. Prompt diagnosis using transvaginal ultrasound and serum β-hCG levels continues to be the cornerstone of early detection and morbidity reduction.

Given the growing intersection between elective cosmetic surgery and emergency gynecologic care, further research and surgical awareness are needed to guide best practices. Developing tailored surgical strategies for patients with a history of abdominoplasty may not only improve outcomes but also prevent potentially life-threatening complications in a rising and often under-recognized clinical subgroup.