

INTRODUCTION:

An ectopic pregnancy [EP] occurs when the fertilised ovum implants outside the endometrial cavity. An EP has an incidence of 1%, with the majority occurring in the fallopian tube. It has a maternal mortality of 0.2 per 1000, with about two thirds of these deaths associated with substandard care. An interstitial pregnancy occurs when the EP implants in the interstitial part of the fallopian tube. An interstitial ectopic pregnancy [IEP] shows few early clinical symptoms, hence it is associated with serious or fatal bleeding and a mortality rate of up to 2.5%. With the advent of transvaginal ultrasound scan [TV USS] with serum beta human chorionic gonadotropin [BHCG] assay, earlier diagnosis of an EP can be established. An EP is often diagnosed in women who are trying to conceive; therefore, the prognosis of future fertility is one of the main concerns with this diagnosis. Management can be surgical, expectant or medical with methotrexate [MTX]. However, the best approach is tailored to the woman’s individual case.

CASE PRESENTATION:

A primigravida woman in her early 30s presented with left sided abdominal pain and heavy vaginal bleeding at six weeks gestation. It was an assisted conception with invitro-fertilisation as she was diagnosed with premature ovarian failure. She underwent two embryo transfers on day 4. Her medical history was unremarkable. Her gynaecological history included subfertility and she underwent hysteroscopy prior to her IVF. Her medications included folic acid 5mgs once daily and Omega-3 fish oil capsules. She described her left sided abdominal pain as sharp and radiating to her left groin. Her bowels were opening and she was passing urine. Her BMI was 21kg/m2. She was stable with observations as follows: BP 120/85mmHg, heart rate 65 beats per minute, respiratory rate 12, SpO2 100% on air and temperature 36.5C. Cardiovascular and respiratory examination were unremarkable. Abdominal examination confirmed generalised lower tenderness. There was no peritonism. Speculum and bi-manual examination revealed no evidence of an adnexal mass or excitation. Heavy vaginal bleeding was present and clots were removed from the cervical os.

INVESTIGATIONS:

Her urine pregnancy test was positive. Urinalysis was negative. Laboratory investigations confirmed a haemoglobin of 134g/L. Her clotting, renal and liver function tests were normal. A transvaginal ultrasound scan showed no evidence of a gestation sac. The endometrial thickness was 5.6mm. Both ovaries appeared normal. There was no adnexal mass or free fluid. **[Figure 1]** Her BHCG was 4,086iu/L indicating a pregnancy. A repeat TV USS 48-hours later showed no evidence of an intra-uterine pregnancy. **[Figure 2]** The woman was extremely tender when scanning the left adnexa. She was therefore placed on the Pregnancy of Unknown Location Pathway [PUL].

	BHCG	HOURS
2,213iu/L	Baseline	
4,086iu/L	48	
4,361iu/L	96	
4,129iu/L	150	

Table 1.



Figure 1.



Figure 2.

DIFFERENTIAL DIAGNOSIS:

A failing intra-uterine pregnancy/miscarriage was initially considered as the diagnosis. However, due to the suboptimal rise of her 96-hour BHCG and an empty uterus on USS, an ectopic pregnancy was considered most likely.

TREATMENT:

As her serial BHCGs remained static, she was taken to theatre for a diagnostic laparoscopy. A right sided interstitial ectopic was observed measuring 1.5cm. **[Figure 3, 4, 5]** There was no evidence of rupture or bleeding. As the woman was nulliparous and considering further assisted reproductive techniques medical management with methotrexate was advised.

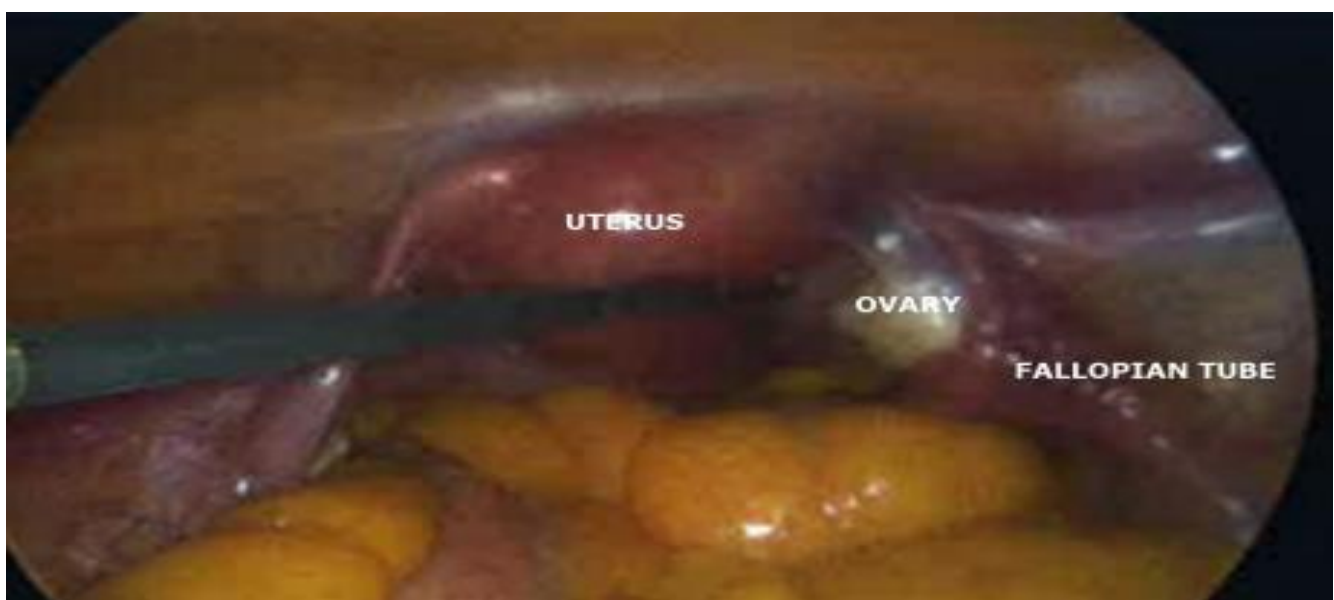


Figure 3.

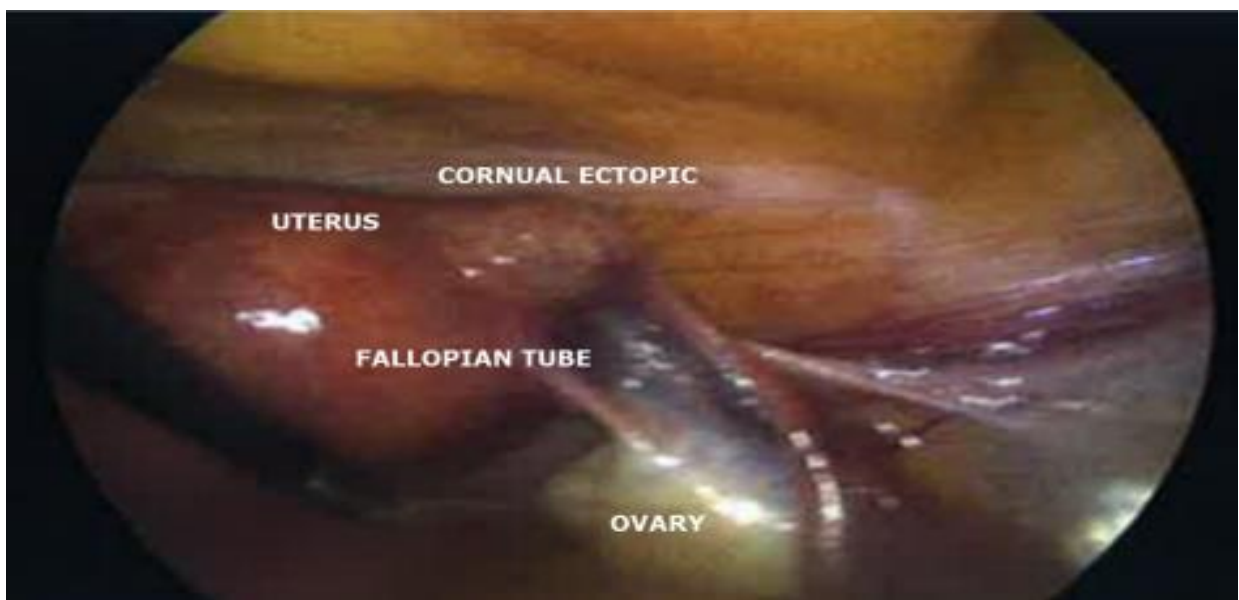


Figure 4.

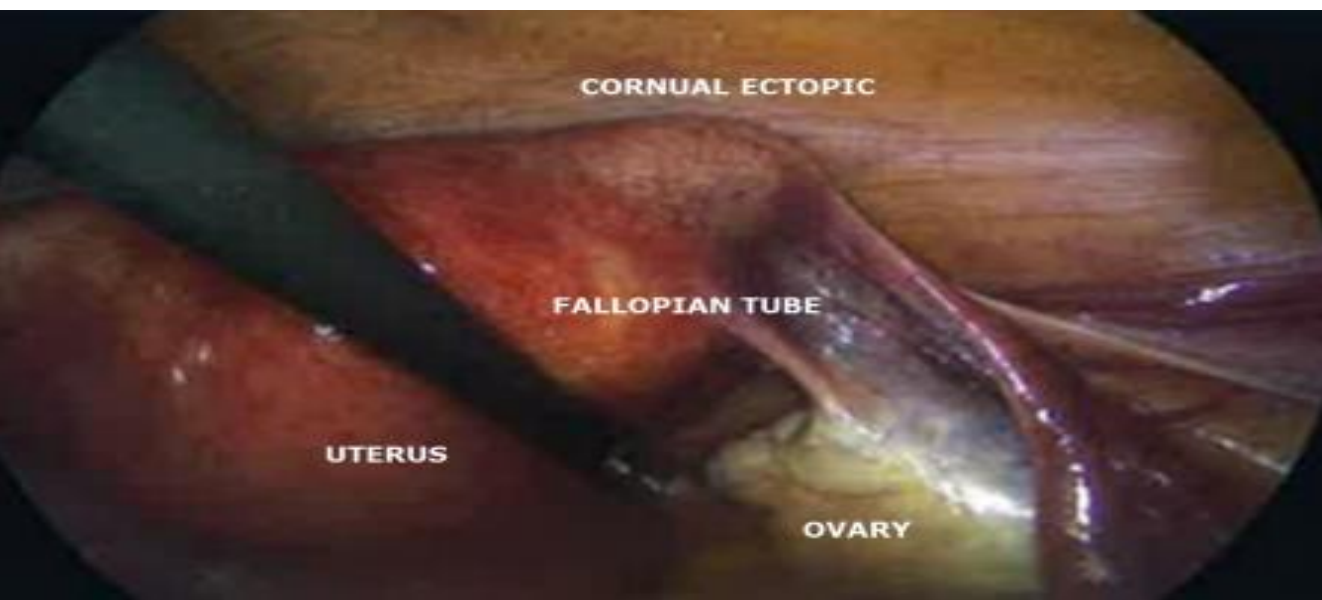


Figure 5.

OUTCOME AND FOLLOW-UP:

A second dose of methotrexate was administered. Her BHCG reduced and she was followed up until her BHCG was negative. She reported no adverse effects from the methotrexate. She plans a further attempt at in vitro fertilization.

DISCUSSION:

The diagnosis and management of IEPs remain challenging due to the rarity of these cases and the paucity of evidence to guide management. Ultrasonography remains the first line investigation with MRI a useful adjunct if the diagnosis remains uncertain. Further studies using prospective data from multiple centres are required to assess the impact of the various management options on the short and long-term outcomes such as fertility and pregnancy/labour complications.