

Interstitial Pregnancies: a Case Series

Dr Amy Daglish (St2 Obstetrics and Gynaecology, North West London)

Miss Anjali Sharma (Consultant Obstetrics and Gynaecology, West Middlesex Hospital)

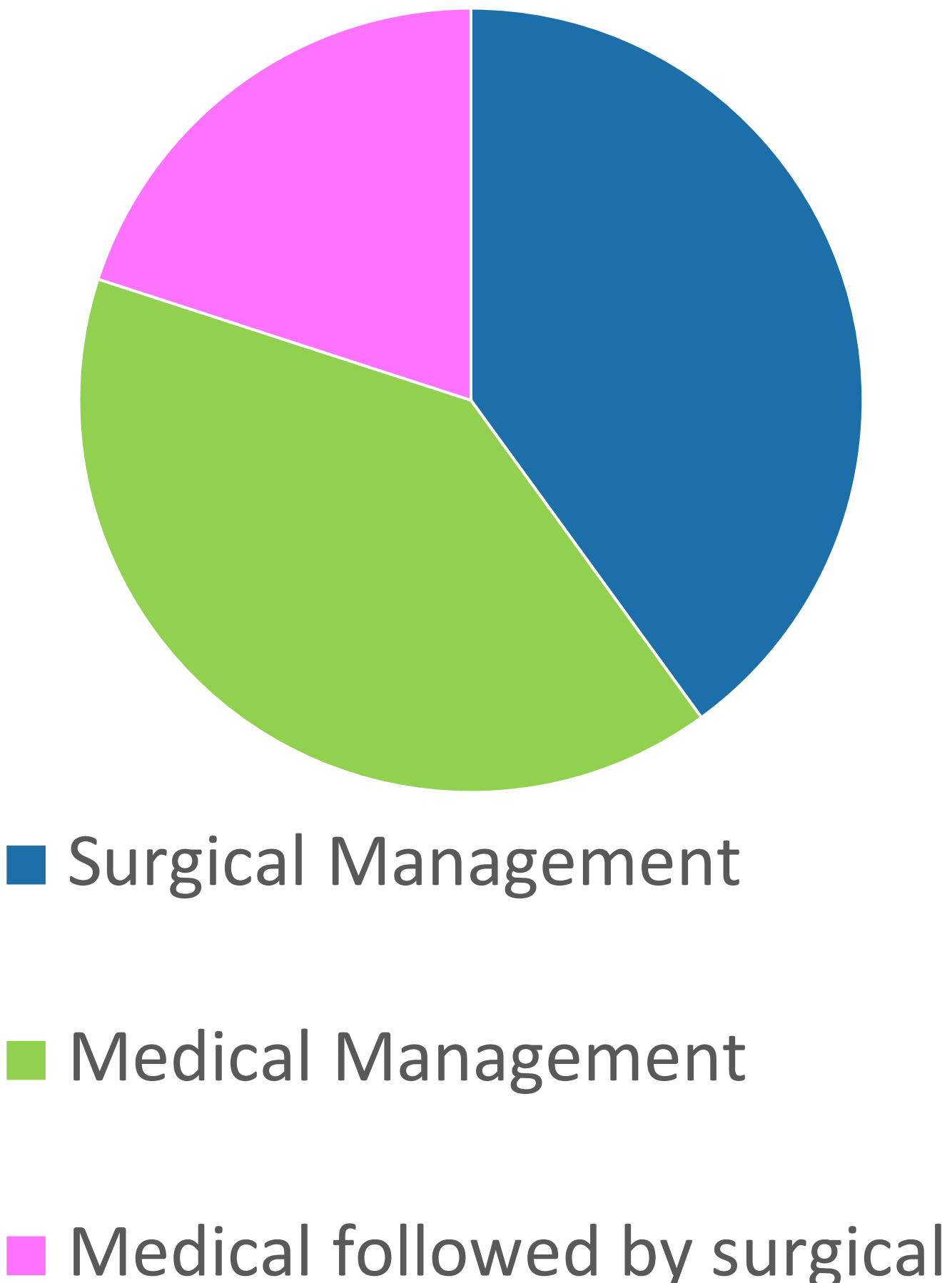
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Objective; Review of 5 cases of Interstitial pregnancy and it’s management at Early Pregnancy Unit, West Middlesex University Hospital, London.

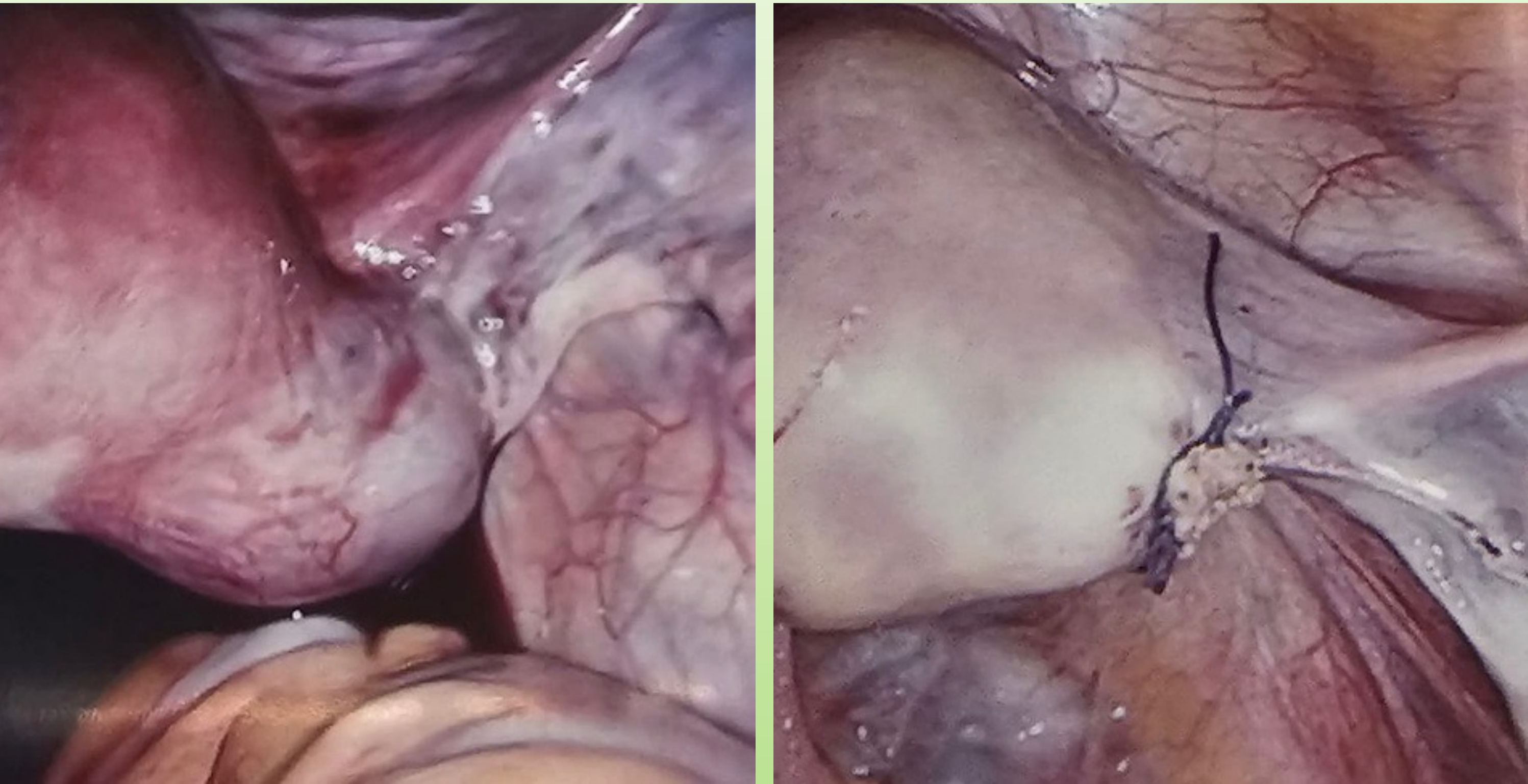
Background; It is recognised the incidence of ectopic pregnancy is increasing; likely secondary to factors including increased prevalence of assisted reproductive techniques, frequency of pelvic inflammatory disease and advancing maternal age (1,2). Of all ectopic pregnancies, between 2-4% are interstitial pregnancies (3). This occurs when the blastocyst implants in the proximal portion of the fallopian tube, within the myometrium (4). Diagnosis and management is challenging; with relatively increased morbidity and mortality thanks to delayed diagnosis and catastrophic bleeding secondary to rupture (2,3). The myometrium can accommodate a much larger gestational sac than the fallopian tube (3). This, combined with the increased blood supply provided by the arcuate vessels, can prove a deadly combination; with mortality rates from 7 to 20 times the average for tubal ectopic pregnancies (5).

Case series: From 1st July to 31st December 2022, 5 cases of interstitial pregnancy were diagnosed at our EPU. They presented between 5th- 11th weeks gestation based on last menstrual period, with presenting complaint being abdominal pain and/or vaginal bleeding. All were haemodynamically stable. βhCG (beta human chorionic gonadotrophin) measurements varied from 280 to 18000 IU/L at first assessment and number of pelvic ultrasound scans required before management ranged from 1 to 5.

Management of Interstitial Pregnancy



	Case 1	Case 2	Case 3	Case 4	Case 5
Age (years)	24	26	30	41	29
Presenting Complaint	Light vaginal bleeding	Vaginal bleeding and abdominal pain	Vaginal bleeding and abdominal pain	Vaginal bleeding and abdominal pain	Abdominal pain
Gestation (based on LMP)	5+2/40	6+6/40	5+6/40	8+1/40	11+0/40
Initial βhCG	280	957	5164	1952	18,000
Ectopic risk factors	Nil	Previous pelvic infection	Previous medically managed right tubal ectopic	Advanced maternal age	Nil
Number of ultrasounds scans to make diagnosis	5	3	1	2	2
Diagnostic scan findings	Right interstitial ectopic 12x10.3x8.6mm	Right interstitial ectopic 8x8x6mm.	Right interstitial ectopic 11x13x14mm.	Right interstitial ectopic pregnancy. 8.2x7.1x8.2mm.	Right interstitial ectopic 17.8x14.2x9.1mm.
Initial management	Methotrexate (MTX)	MTX	Right Salpingectomy – uncomplicated, estimated blood loss (EBL) 320ml.	MTX	Right Salpingectomy - partial rupture noted on entry, EBL 1.2L.
Need for further treatment	HCG rise from day 4 to day 7 post MTX, re-scan showed live interstitial ectopic not suitable for second dose MTX. Decision made for right laparoscopic salpingectomy. EBL 50ml.	Presented to ED 3 weeks post MTX with bleeding and pain but resolved with no further action required.	Nil	Nil	Nil
Outcome	Discharged from EPU follow up (FU) 11 days post op; βhCG 13	Discharged from EPU FU 6 weeks post MTX; βhCG 3	Discharged from EPU FU 2 weeks post op; βhCG 6	Discharged from EPU FU 4 weeks post MTX; βhCG 5	Discharged from EPU FU 2 weeks post op with negative UPT



Images 1 (left) and 2 (right): intraoperative images taken before (1) and after (2) right salpingectomy for interstitial ectopic pregnancy. In this case, endoloop x3 was applied to the uterine wall, medial to the ectopic pregnancy. Then argipressin injection was used to reduce vascularity, before dissecting the tube using Voyant tech.

Discussion: When reviewing these 5 cases, all patients were successfully discharged from follow up within 42 days from presentation. The variation in number of pelvic ultrasound scans required can be explained by gestation and operator experience. All patients were discussed in the EPU multidisciplinary team meeting (MDT), but there was no standardised procedure for deciding management. Reasons stated for surgical over medical management included high βhCG, live ectopic or pelvic free fluid. The justification for medical management was not always clear, once citing ectopic location making laparoscopy technically challenging, thus less appropriate, and another being patient choice. The variation in management highlights a paucity of clear pathways or guidance to lead these patients’ care.

Conclusions: Whilst interstitial pregnancy is statistically uncommon, this case series presented a rare opportunity to look at a collection of patients identified over a short period of time. It appears surgical management is the preferred method but can present a dilemma when patient choice differs.