

# Intrauterine Pregnancy of Uncertain Viability (IPUV): Management and Outcomes



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## Background

- IPUV is seen in 10-29% of all intra-uterine pregnancies
  - Fetal pole of < 7mm with no fetal heartbeat
  - MGSD <25 mm with no visible fetal pole or yolk sac
- Two groups of IPUV
  - i. Having a scan too early
  - ii. Poor prognostic signs – eg discrepancy between the menstrual/IVF and ultrasound dates
- Inconsistent timeframe for determining pregnancy viability
- Emotional distress well demonstrated
- **Possibly other adverse outcomes?**

## Aim

1. **Outcomes for women initially diagnosed with an IPUV** and whether there are differences between IVF and spontaneously conceived pregnancies.
2. **Whether women who subsequently miscarried after IPUV compared with those who had an initial diagnosis of missed miscarriage (MMC) were more likely** to present to Emergency, have haemodynamic instability and/or require emergency dilatation and curettage (D&C).
3. **Compliance with the guidelines for repeat scans**

## Study Design & Method

- Retrospective cohort study at tertiary hospital early pregnancy assessment clinic (01/01/2019 to 31/12/2021).
- All women with an IPUV on initial ultrasound were included. Outcome measures were time interval between scans, number of scans required for definitive diagnosis, viability at 11-14 weeks gestation, and management of a subsequent miscarriage. Comparisons were made between IVF and spontaneous pregnancies. The number of ED presentations, estimated blood loss (EBL) at D&C, haemodynamic instability, and need for blood transfusion were compared between those diagnosed at initial scan with IPUV and those with MMC who elected to have surgical management

## Results

**Table 1: Spontaneous vs IVF pregnancies**

| Prognosis of IPUV                                         | Spontaneous conception | IVF     | p value    |
|-----------------------------------------------------------|------------------------|---------|------------|
| IPUV subsequently viable at 11 to 14 weeks gestation n(%) | 151 (30)               | 5 (6)   | p < 0.0001 |
| Mean interval to definitive diagnosis (days)              | 16.8                   | 12.3    | p = 0.0049 |
| Needed an emergency D&C n(%)                              | 42 (8)                 | 12 (16) | p = 0.0226 |
| Average EBL at D&C (mL)                                   | 94                     | 50      | p = 0.0030 |
| Spontaneous miscarriage n(%)                              | 102 (20)               | 10 (14) | p = 0.3832 |

**Table 2: Outcomes IPUV vs missed miscarriage**

| Outcomes                                | IPUV     | MMC     | p value    |
|-----------------------------------------|----------|---------|------------|
| Spontaneous miscarriage n(%)            | 95 (24)  | 2 (0.7) | p < 0.0001 |
| Presented to ED after initial scan n(%) | 107 (27) | 22 (7)  | p < 0.0001 |
| Needed an emergency D&C n (%)           | 73 (49)  | 50 (21) | p < 0.0001 |
| Average EBL at D&C (mL)                 | 82.0     | 111.0   | p = 0.0562 |
| Haemodynamic instability n(%)           | 16 (4)   | 7 (2)   | p = 0.2298 |
| Required blood transfusion n(%)         | 8 (2)    | 4 (1)   | p = 0.5176 |

**12% of women with IPUV were scanned earlier than recommended**

## Conclusion

- **Women with IPUV compared with initial MMC had**
  - A higher incidence of ED presentations for vaginal bleeding and abdominal pain
  - An increased need for an emergency D&C
- **IPUV in IVF pregnancies**
  - 6% are viable at 11-14 weeks gestation
  - Could the criteria be less conservative for IVF pregnancies?