

Anesthetic management of an incarcerated gravid uterus on a knee chest position; A case report and a narrative review of literature of anesthetic management from 1971 to 2021 (50 years)

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Introduction

- Incarceration of the gravid uterus is a rare obstetric disorder that contributes to pregnancy-related complications.
- Anesthetic options to manually reduce an incarcerated gravid uterus in the second trimester are limited and thus pose a challenge especially when the obstetricians prefer to position the patient in a knee chest position for the procedure.

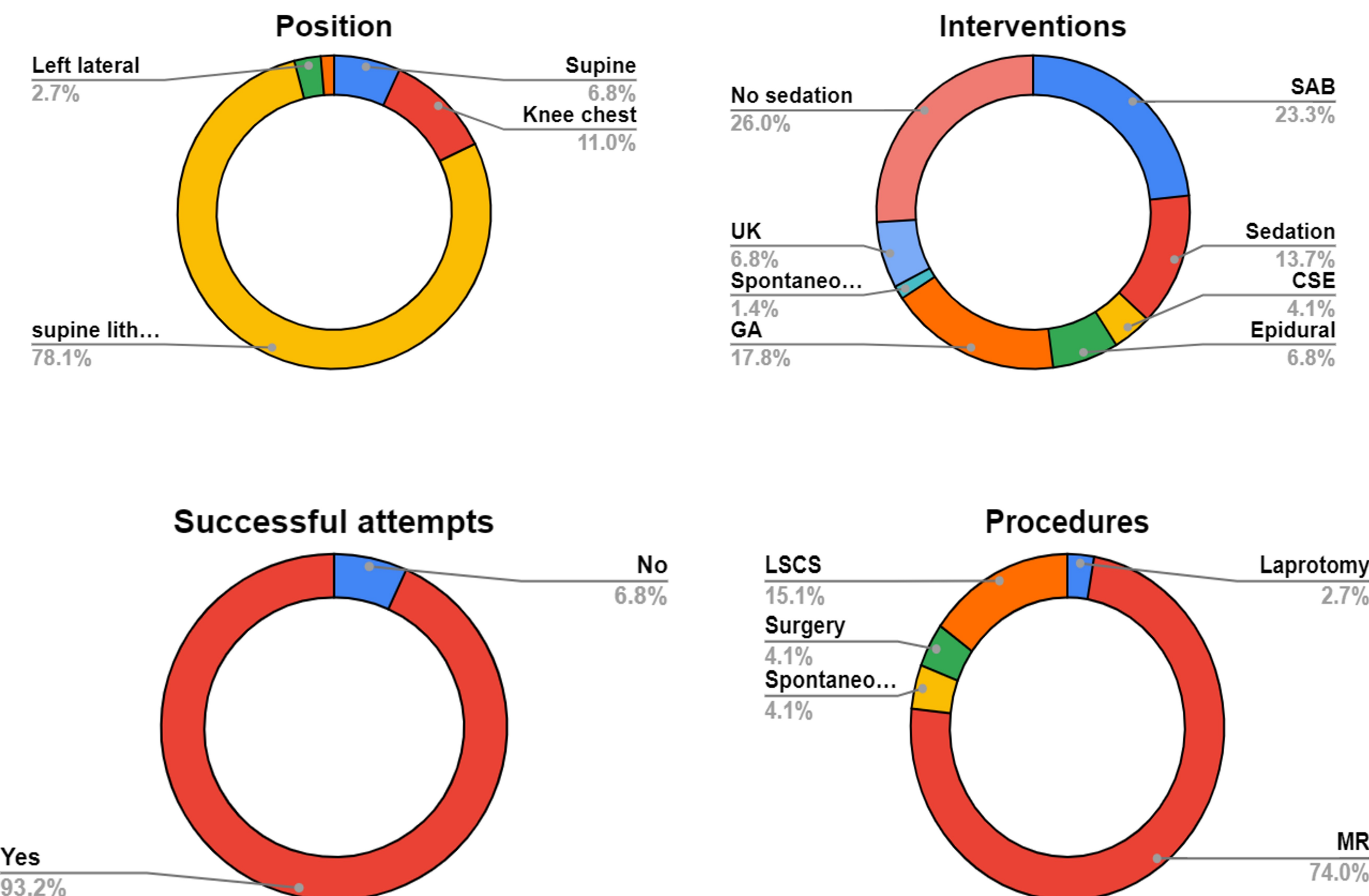
Case report

- A 41-year-old G3P2, otherwise healthy presented with urinary retention and lower abdominal pain at 22+2 weeks gestational age.
- On manual examination, the cervix was difficult to assess, and the fetal head was felt low in the rectovaginal pouch. Retroverted incarcerated uterus with a very anterior cervix was diagnosed on an urgent targeted scan.
- The patient was brought to the operating room and all standard monitors were attached.
- A lumbar epidural was inserted at L3-4, and the patient was positioned prone on all four limbs for manual reduction of the incarcerated uterus.
- One obstetrician attempted manual replacement of the uterus transabdominally while another simultaneously attempted intravaginally.
- An additional 8cc of 2% lidocaine with epinephrine via epidural were given to ensure patient comfort throughout the duration of the procedure.
- Manual replacement of the uterus was successful after a total of 3 attempts lasting 30 minutes.

Literature review

- Ovid Medline, Embase and Cochrane Central were searched from inception to February 16th, 2022.
- The Mesh/ Emtree term incarcerated uterus was explored to include its narrower terms and the text word incarcerated uterus in pregnancy and its variations were searched in the abstracts, titles and keywords.
- This resulted in 73 articles involving 93 patients.

Results



- The mean gestational age = 14.
- The mean age group = 26.
- The most common mode of management was manual reduction followed by CS and in rare scenarios a midline laparotomy was performed.
- 10.8% of patients were placed on a knee chest position for manual reduction under an epidural similar to our case report and 83.8 % of patients were placed in a supine lithotomy position for manual reduction.
- The most common symptoms reported by the patients were abdominal pain (83.6%) ,dysuria (78.1%) and urinary retention (83.6%)

Conclusions

Gravid uterine incarceration is rare and, because of its non-specific clinical presentations, is often misdiagnosed. There are limited treatment options for uterine incarceration, Anesthetic management of uterine incarceration has not been well described on an extensive literature search. A well balanced and titrated epidural is beneficial for manual reduction of an incarcerated gravid uterus especially when the obstetricians prefer to place the patient in an unorthodox knee chest position as it can preserve motor function.

References

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