Case Report: A rare case of transmyometrial migration of endovascular coils causing chronic pelvic pain and pelvic inflammatory disease.

Improving outcomes in cultural and linguistically diverse (CaLD) women

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Introduction

Coil migration and extrusion is a very rare complication of uterine artery embolization (UAE). This report describes the transmyometrial migration and vaginal extrusion of coils originally placed to manage a post-partum haemorrhage, but caused extreme chronic pelvic pain and pelvic inflammatory disease (PID) in a culturally and linguistically diverse (CaLD) woman. Although UAE has been shown to be safe and effective for women who wish to preserve their uterus, there is a growing body of evidence that shows it has significant impact on fertility.

Most cases reporting embolic coil migration were following treatment of pseudoaneurysms or pelvic congestion syndrome (PCS), which accounts for 30-40% of women presenting with chronic pelvic pain. Multiparous women of reproductive age have a higher risk of developing PCS, a condition with an overall prevalence of about 30%.

The cultural and societal impact of pelvic surgical intervention on women from CaLD backgrounds is significant. Where medical interventions can negatively impact their fertility and subsequent loss of societal standing within their communities, careful consideration of involving a multi-disciplinary team, particularly focusing on the long-term psychological health and well-being of the patient, is paramount.

Discussion

Coil embolization is an effective way of managing a post-partum haemorrhage where preservation of fertility is a significant priority, especially in women from CaLD backgrounds. The current literature supports the use of UAE for the management of PCS with it being considered more effective than pharmacotherapy. Complications of pelvic embolization include vein perforation, delayed coil migration, pulmonary infarcts, duodenal, vaginal and uterine migration. The presence of chronic pain for 5 years post the procedure (which was routinely the solution to pelvic pain), impacting considerably on QoL and mental health, is what made this case unique and interesting.

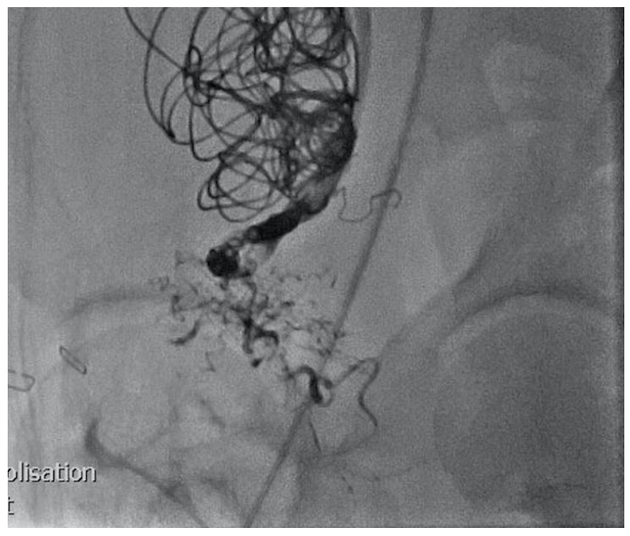
The psychological aspect of chronic pain, had a significant impact on the patient. She described feeling as though she had let her husband and family down given that she was unable to have any successful pregnancies post the UAE. The psychological impact of any intervention that could lead to sub-fertility/infertility warrants further exploration to better understand the cultural and language barriers in CaLD populations. This might help address their mistrust of the 'Western' healthcare system, given the perceived cultural disconnect between the CaLD community and our delivery of care.

Case Report

A 38 year old Para 3, of East African descent, with a history of 3 previous caesarean sections presented with pelvic pain in early 2020. An ultrasound indicated a right sided tubo-ovarian abscess for which she was treated with antibiotics for 5 days and managed conservatively given she wanted uterine preservation for fertility. Appropriate follow up was arranged, at which stage the patient reluctantly opted to proceed with definitive surgery to manage her pain, which had significantly impacted her quality of life (QoL), rather than conservative treatment options.

Obstetric history:

- First caesarean section: 2012, East Africa
- Moved to Australia on humanitarian grounds
- Second caesarean section: 2014, Western Australia
- Complication: Atrial Fibrillation and Preeclampsia
- Third caesarean section: 2015, Western Australia
- Complication: 1.5 litre post-partum haemorrhage (PPH) secondary to a right sided broad ligament haematoma, requiring a UAE performed by vascular surgery.
- Complication: Cardiac arrest that lasted 3 minutes prior to return of spontaneous circulation.
- Cardiac arrest causes: differentials included amniotic fluid embolus (AFE), anaphylactoid reaction or a vagal response
- Possibility of a pseudoaneurysm rupture causing the PPH was also considered.



Uterine Artery Embolisation

Issues since interventional procedure (UAE):

- Significant chronic pelvic pain
- Multiple presentations with vaginal extrusion of coils
- Multiple in-patient admissions for management of pelvic pain

Imaging:

- CT Abdomen (2015): Fig. (1)
  - Large pseudoaneurysm in broad ligament 7cm AP x 4.7cm TR x 6cm CC
- CT Abdomen (2018): Fig. (2)
  - Extensive embolisation material in right adnexa, extending to vaginal wall.
- Pelvic Ultrasound (2018):
  - Embolic coils migrated into the paracervical tissues, cervical stroma, and extrude into the cervical canal.
- Pelvic Ultrasound (2020):
  - Right pyosalpinx. Embolisation coils visible in cervical stroma and within cervical canal.
- CT Abdomen (early 2020):
  - Right tubo-ovarian complex abscess with size increase from previous scan; multiple embolisation coils seen posteriorly.

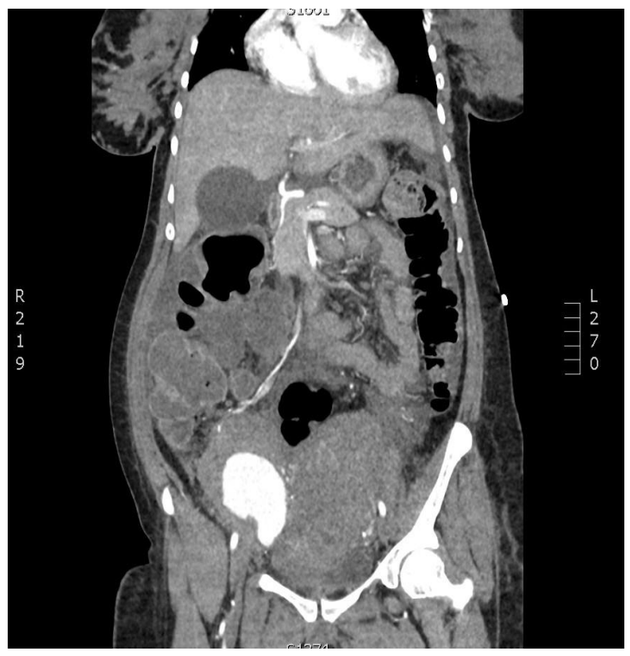


Figure 1

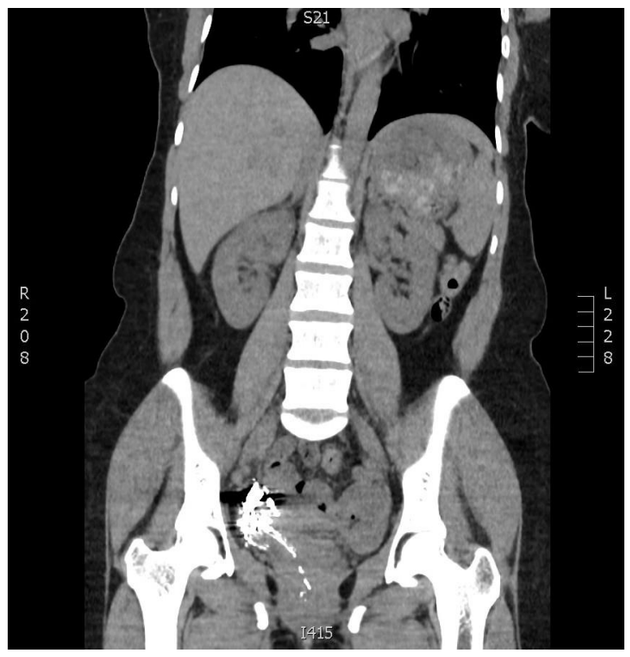


Figure 2

After enduring years of chronic pelvic pain, PID, and multiple admissions to hospital, she opted for **surgical management** in July 2020 which comprised of:

- Laparotomy
- Total abdominal hysterectomy
- Bilateral salpingectomy
- Right oophorectomy
- Ureteric stents

Teams involved:

- General Gynaecology
- Urogynaecology
- Vascular surgery

Post-surgical management:

- Antibiotics for two weeks

Conclusion

The migration of endovascular coils as part of a UAE for the treatment of haemorrhage, pseudoaneurysms or PCS is considered a rare complication. In this case, however, further investigation may have been warranted earlier to identify a cause for her pain and sub-fertility/infertility.

Endovascular retrievals of migrated coils are generally considered a safe intervention, with good success rates, especially in symptomatic patients. If this procedure were undertaken earlier in the course of her chronic pain journey, it may have given her significant pain relief, and avoided the need for major abdominal surgery.

More work needs to be undertaken in understanding CaLD women's perspectives around fertility, which might assist in the provision of culturally safe reproductive health education and enhance their trust in the Australian healthcare system.

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