Uterine Artery Embolisation

Minimally Invasive Treatment Option for Symptomatic Uterine Fibroids in Women with Medical Comorbidities

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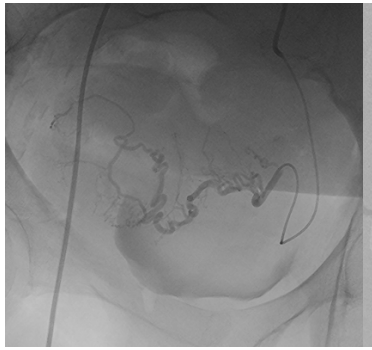
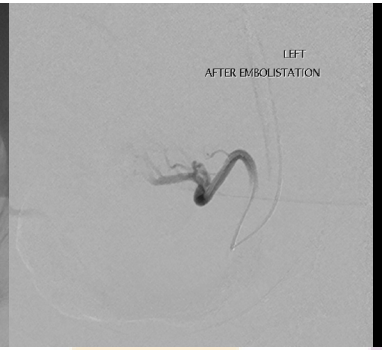
Uterine artery embolisation (UAE) is an established minimally invasive and uterine-sparing treatment option for symptomatic uterine fibroids[1] . Compared to hysterectomy and myomectomy, UAE has a shorter length of hospital stay, shorter recovery period and similar rate of symptomatic improvement, however a higher rate of reintervention in the future[2,3]. Requiring sedation only, UAE is an attractive option in women with medical comorbidities precluding general anaesthesia.

To demonstrate the technique and process, here we present two cases of UAE performed in women with medical comorbidities.

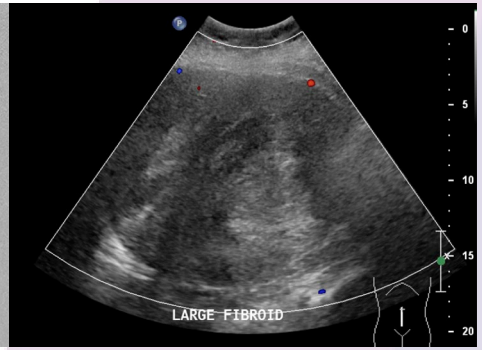
Case 1 – A 35-year-old woman with familial dilated cardiomyopathy, 50% left anterior dissection, and left-ventricular ejection fraction of 8% was referred with symptomatic uterine fibroids (dysmenorrhoea and menorrhagia) refractory to goserelin injections.



Selective catheterisation of the left uterine artery (horizontal segment) and contrast injection showing serpiginous fibroid vessels



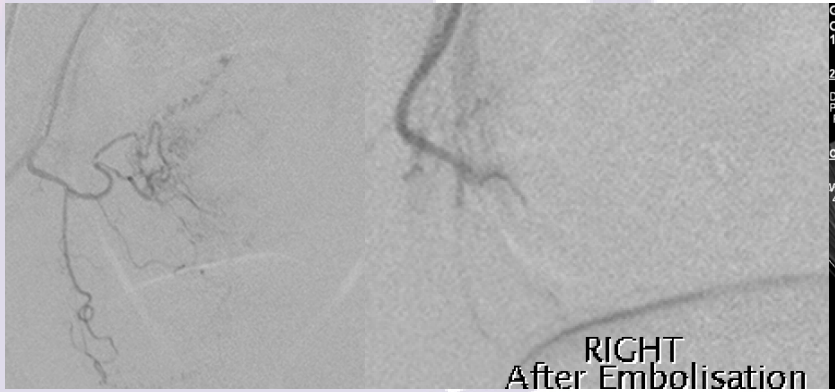
Post-particle embolisation with near-stagnant flow to the fibroid feeder arteries



Ultrasound examination at 6 weeks post-operatively showing devascularisation of the fibroids

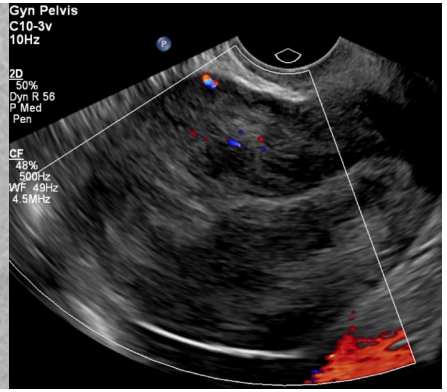
UAE is performed via the femoral or radial artery with selective catheterisation of the bilateral uterine arteries under angiographic guidance. An embolic agent (typically PVC particles) is then injected until the flow is near-stagnant. After a short period of recovery with analgesia, patients are typically discharged the next day, then followed up at 6 weeks and 6 months in the IR clinic.

Case 2 – A 45-year-old woman with obesity (BMI 58) and sleep apnoea was referred with symptomatic uterine fibroids dysmenorrhea and menorrhagia.



Selective catheterisation of the right uterine artery and contrast injection showing serpiginous fibroid vessels

Post-particle embolisation with near-stagnant flow to the fibroid feeder arteries



Ultrasound examination at 6 weeks post-operatively showing devascularisation of the fibroids

Bilateral UAE was performed under sedation in both cases, with technical success at the time and on ultrasound at 6 weeks post-operatively.

Conclusion:
Beyond medical management, women with medical comorbidities may have a limited number of operative or procedural options for treatment of symptomatic uterine fibroids. UAE can be an effective option in this cohort and performed with sedation only.

1. de Bruijn AM, Ankum WM, Reekers JA, et al. Uterine artery embolization vs hysterectomy in the treatment of symptomatic uterine fibroids: 10-year outcomes from the randomized EMMY trial. Am J Obstet Gynecol. 2016;215(6):745 e1- e12.
2. Manyonda I, Belli AM, Lumsden MA, et al. Uterine-Artery Embolization or Myomectomy for Uterine Fibroids. N Engl J Med. 2020;383(5):440-51.
3. Daniels J, Middleton LJ, Cheed V, et al. Uterine artery embolization or myomectomy for women with uterine fibroids: Four-year follow-up of a randomised controlled trial. Eur J Obstet Gynecol Reprod Biol X. 2022;13:100139.