Management of heavy menstrual bleeding:
The role of Uterine Artery Embolisation

DR EISEN **LIANG** *MBBS (Hon1 UNSW), FRCR, FANZCR*

Dr Eisen Liang has been an interventional radiologist at the San since 2004. He has special interest in women's health intervention using embolisation to treat fibroids, adenomyosis and pelvic congestion syndrome. He works collaboratively with gynaecologists and conducts clinical research at the San. He consults patients at San Clinic, Bella Vista, Chatswood and Westmead Private.
P: 9473 8728 F: 9473 8721 E: info@sir.net.au W: www.sydneyfibroidclinic.com.au

Fibroids and adenomyosis are common benign uterine conditions that can cause heavy menstrual bleeding (HMB). Fibroids are present in 25% of women in their reproductive years and adenomyosis is present in 40-70% of hysterectomy specimens. Both quite often coexist. The clinical symptoms of the two conditions are very similar, although pressure symptoms are more likely to be related to large fibroids and severe period pain is more likely to indicate the presence of underlying adenomyosis.

Primary Care check list for fibroid and adenomyosis related HMB:

- Speculum exam to check vagina and cervix
- Make sure pap smear is up to date and normal
- Assess risks of endometrial cancer
- Basic bloods: FBC, iron study, thyroid function, (Clotting profile, pregnancy test if relevant)
- Transvaginal ultrasound: Check endometrial thickening. Rule out intracavitory lesions (polyps and fibroids).

Initial imaging investigation should be a high quality transvaginal ultrasound (TVUS). However, in the presence of fibroid, TVUS might miss adenomyosis or mistaken focal adenomyosis as fibroids. Sonographic features of diffuse adenomyosis might be subtle. Clinical suspicion based on severe HMB and period pain should be clearly indicated on the imaging request form to prompt for careful interrogation.

Primary care conservative treatments for fibroid and adenomyosis related HMB:

- Tranexmic acid (Cyklokapron) 500mgx2 QID
- NSAID (eg Mefanamic Acid Ponstan 250mg x2 TDS)
- Progestogen (Primolut N 5mg TDS x 10 days for acute bleeding)

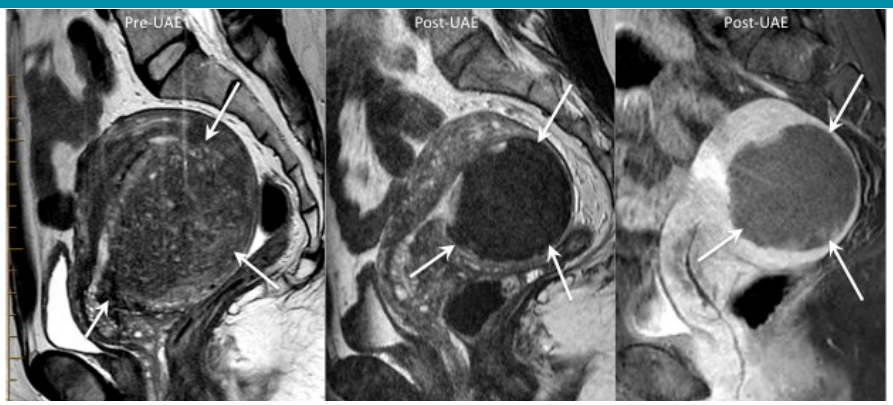

Figure 2: MRI showed a large area of adenomyosis (arrows) in the back wall of the uterus; 6 months post UAE MRI showed infarction of focal adenoyosis (arrows), and shrinkage from 272ml to 115ml

- Combined oral contraceptive pills (COCP)
- Progesterone-releasing IUD (Mirena)
- Iron supplement / infusion.

When conservative treatments have failed, uterine artery embolisation can be an effective non-surgical option for women trying to avoid hysterectomy. UAE is an angiographic procedure performed under local anaesthetic and sedation. Via femoral artery access, the uterine arteries are catheterised and embolic particles injected. Particles blocking fibroid and adenomyotic arteries cause infarction of these pathologic tissues, which have no capacity to reopen new vessels. Some particles might block arteries of normal myometrium, which however, has immense capacity to recruit and reopen dormant vessels and therefore remains viable. All fibroids are treated, large or small, one or multiple. Coexisting adenomyosis is also treated simultaneously. The recovery is 1 night hospital stay and 1 week at home, mainly for post-embolistion syndrome-pain, nausea, low-grade fever and lethargy.

Overall clinic success of UAE for fibroids and adenomyosis is around 90%. Major procedure related complications, like injuries to major vessels and non-target embolisation, are extremely rare. Sloughing of fibroid fragment from a submucosal fibroid abutting the uterine cavity might cause cervical obstruction requiring cervical dilatation and removal.

Evidence on efficacy of UAE for fibroids:

- First reported 1995
- Cochrane Review 2014:
  7 Randomised control trials UAE vs Hysterectomy/Myomectomy
  Similar outcome in term of symptom relief, patient satisfaction and QoL improvement
- Local experience published in ANZJOG 2012:
  93% patient satisfaction, no major procedural complications
- MSAC (Medicare) review 2006: " Safe and effective"
- Pregnancy is possible after UAE; no change in FSH and AMH.

Evidence on efficacy of UAE for adenomyosis:

- Multiple case series reported safety and efficacy
- Local experience published in ANZJOG 2018:
  90% patient satisfaction, no major complications.

Who to refer for UAE:

- Women who failed conservative treatments for HMB
- Women who are not keen on surgery
- Size and number of fibroids do not usually matter for UAE
- Coexisting adenomyosis is treated effectively at the same time
- Poor surgical candidates can be suitable for UAE: Obesity, previous surgery/adhesions, Jehovah's Witness, on anticoagulants/ antiplatelets for DVT/PE/Stents (UAE can be done without stopping).

Details please see Drs' Info at: www.sydneyfibroidclinic.com.au

References available on request.

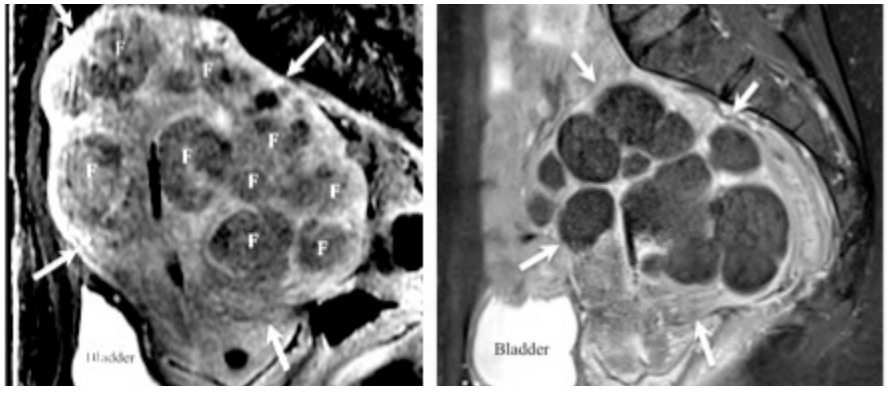

Figure 1: Pre-UAE MRI showed numerous fibroids denoted as "F". The fibroids became infarcted and no longer viable, seen as nonenhacing nodules of hyaline degeneration. The uterine volume reduced from 781ml to 349ml.