GUIDELINES FOR UTERINE ARTERY EMBOLISATION (UAE)

UAE OVERVIEW

- Prospective randomised studies such as EMMY (Volkers et al. 2008) and REST (Edwards et al. 2007) have proven the role of UAE in the treatment of symptomatic fibroids.
- UAE should be considered as one of the treatment options alongside surgical treatments, endometrial ablation, medical management and conservative measures (RCOG/RCR 2013).

- *Indication*:
  - Significant lifestyle-altering symptoms, specifically heavy menstrual bleeding, severe dysmenorrhoea or anaemia (level 1 evidence)
  - Further indication in fibroids causing pain or mass effect on bladder or bowel (level 3 evidence)
  - UAE can also be undertaken for control of symptoms from adenomyosis (Nijenhuis et al. 2015).
- *Contraindications*:
  - Viable pregnancy
  - Gynaecological malignancy
  - Active uterine infection
- *Outcomes*:
  - Technical success: 95-97% (REST & EMMY)
  - Clinical outcome: 92% satisfactory at 24 months (EMMY)
  - Secondary hysterectomy: 11% at 32 months (REST)

GYNAECOLOGICAL REVIEW

- Review by gynaecologist in clinic, with aim to confirm diagnosis of fibroid, exclude viable pregnancy and exclude infective or malignant gynaecological pathology.
- Discussion of appropriate alternative treatments including hysterectomy, myomectomy and ablation therapies
- If patient is keen to be referred for consideration of UAE, gynaecology team to write clinic letter to interventional radiology department.
- Gynaecology team to request gadolinium enhanced MRI pelvis (fibroid protocol) at time of writing UAE referral letter.

INTERVENTIONAL RADIOLOGY REVIEW

- Review in IR clinic
- Detailed discussion regarding procedure
- Review of MRI including anatomical suitability for embolisation
- Risks of embolisation reviewed including:

  - Infection
  - Hysterectomy
  - Ovarian failure/early menopause
  - Non-target embolisation
  - Pain, including use of PCA
  - Post embolisation syndrome
  - PV discharge
  - Future gynaecological D&C (particularly pedunculated intra-cavitatory fibroids)
  - Implications for future fertility
- Clinic letter to referring gynaecologist and GP (+/- patient if appropriate). Copy of letter to be filed with IR department.
- IR will fill in radiology request form if proceeding to UAE.

PRE-PROCEDURE PLANNING

- Consent by IR consultant
- Nursing pre-assessment, including explanation of PCA and theatre recovery
- Removal of IUCD pre-procedure by GP practice nurse. Patient to arrange.
- Appointment for first 10 days of woman's menstrual cycle.
- Bed booked on level 11
- Theatre recovery notified of date of procedure.

DAY OF PROCEDURE

- Patient arrived at IR suite at 0800
- Pregnancy test
- IV cannulation
- PCA education
- **Pre-procedure medication:**
  - **Gentamicin 160mg iv**
  - **Paracetamol 1g iv**
  - **Diclofenac 50mg PO (OR PR)**
  - **Oramorph 20mg PO**

PROCEDURE SUMMARY

- Generally right common femoral artery (CFA) access only, occasionally bilateral CFA access.
- Selective catheterisation of bilateral IIA and uterine arteries, with or without microcatheter use.
- Embolisation with particles – PVA or calibrated microspheres - usually in the 500-700micron range, but can be smaller or larger at discretion of operator.

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- Arterial closure devices generally used.
- **Intraprocedural medication:**
  - **Fentanyl 25micrograms iv aliquots, titrated to manage pain**
  - **Ondasetron 4mg iv 6 hourly**
  - **Midazolam 1mg iv aliquots, if required**

THEATRE RECOVERY

- Initial recovery in theatre recovery suite, with IR nurse
- **Analgesia with PCA**, which continues on ward.
- Bed rest 4-6 hours.
- 15 minutes observations for first 2 hours, 30 minutes observations for subsequent 2 hours, routine observations thereafter.
- Observation of arterial access site for haematoma. If haematoma develops, contact IR for review.

WARD CARE

- Monitoring of PCA.
- Arterial access site should be checked for haematoma. If haematoma develops, direct manual compression for 15-20 minutes.
- Can have light dinner on evening of procedure.
- Aim to mobilise the following morning with cessation of PCA.
- IR review the following morning post procedure.
- Aim to discharge home the following morning/afternoon post procedure (after IR review) if pain controlled with oral analgesia.
- Patient must have passed urine pre discharge.
- **Discharge drugs (7 day supply) to be prescribed by gynaecology junior doctors:**
  - **Paracetamol 1g 6 hourly**
  - **Ibuprofen 400mcg 6 hourly OR Diclofenac 75mg 8 hourly**
  - **Dihydrocodeine 30mg 6 hourly**

POST PROCEDURE

- Interventional radiology will arrange follow up gadolinium enhanced MRI pelvis for 3-6 months.
- If post discharge concerns, particularly of infection, urgent gynaecological review and liaison with interventional radiology.

FURTHER READING

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GUIDELINES FOR UTERINE ARTERY EMBOLISATION (UAE)

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