Worcestershire Acute Hospitals NHS Trust

Uterine Fibroid Embolisation (UFE)

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Key Amendments

Date	Amendment	Approved by
26th January 2019	Documents extended	Mr Hughes
Dec 2020	Document approved for 3 years	Miss Alex Blackwell
29th December 2023	Document extended for 6 months whilst under review	Alex Blackwell
20th August 2024	Document extended for 6 months whilst under review	Alex Blackwell

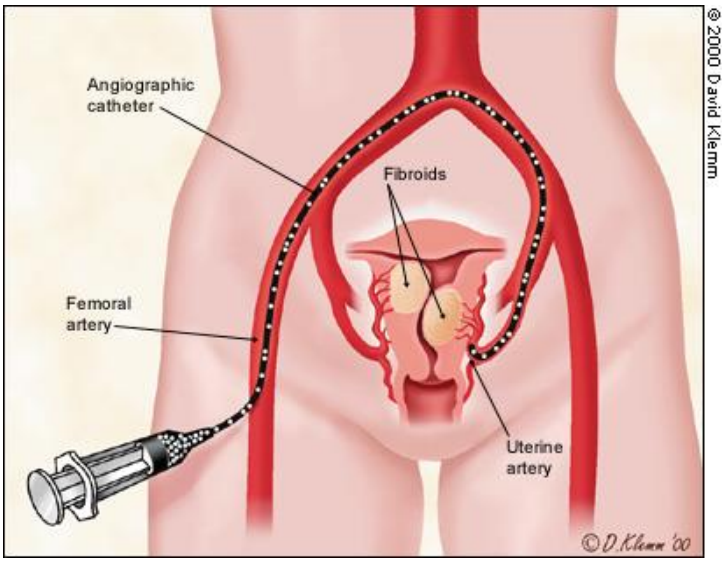
Background

Uterine fibroids are a common cause of gynaecological problems. They may be asymptomatic or cause symptoms such as menorrhagia, dysmenorrhoea, dysparunia, pain or a feeling of pelvic pressure with urinary and bowel symptoms. They may also be associated with reproductive problems such as infertility and miscarriage.

NICE guidance recommends the use of UFE as first line management as an effective and safe alternative to surgical management of fibroids greater than 3cm in diameter. Even large fibroids may be suitable for Uterine Fibroid Embolisation (UFE) there is no specific cut off based upon size alone. UFE is effective in treating all symptoms caused by fibroid including dysmenorrhoea and menorrhagia. The aim of UFE for fibroids is to offer a less invasive alternative to hysterectomy or myomectomy with preservation of the uterus, and a faster recovery time. As an adjunct, UFE is sometimes used before a planned myomectomy. RCOG guidance notes that “The early and mid-term results of UFE are promising indicating that it is at least as safe as the surgical alternatives. It provides good symptom relief and is particularly effective for heavy menstrual bleeding.”

UFE is contraindicated in women who

- have evidence of current or recent infection
- are unwilling to have hysterectomy in any circumstance
- there is significant doubt about the diagnosis of benign pathology bearing in mind the lack of tissue diagnosis
- are postmenopausal



The procedure is done under local anaesthesia along with the use of PCA (Patient Controlled Analgesia) to control pain along with other analgesics. Catheters are inserted into the femoral arteries at the groin level. Fluoroscopic guidance is used to manipulate the catheter into the uterine artery. Small Embolisation particles are injected through the catheter into the arteries supplying the fibroids, with the aim of causing thrombosis and consequent fibroid infarction.

Efficacy
Based on the RCOG / NICE review of the literature, 80-90% of women are asymptomatic or symptoms have improved at one year. There is a reduction in fibroid volume of 40-70% with an average reduction in diameter of 22 mm. In published data the need for repeat treatment or hysterectomy at one year is 10% rising to 20-25% at five years.

In a study of 1387 women, 83% reported improved symptoms when their progress was checked 2 years after the procedure. Quality of life also improved, with average quality of life scores of 44/100 before the procedure increasing to 79/100 after it.

A study of 2112 women also showed a significant improvement in symptoms after the procedure. However, a third study of 157 women compared this procedure with hysterectomy or myomectomy, and showed that although symptoms improved in both groups, the improvements were higher in the hysterectomy/myomectomy group.

Regarding patients requiring treatment to improve fertility 13 out of 26 women who tried to conceive after the procedure became pregnant compared with 31 out of 40 women who had myomectomy. The rate of early miscarriage was 64% in women who had the procedure compared with 23% of women who had myomectomy.

Complications
Septic shock and multiple organ failure leading to death 25 days after UFE occurred in 1 patient in a case series of 21 patients, reported in a systematic review. Septicaemia and emergency myomectomy or hysterectomy were reported in 3% (17/649) of UFE-treated patients and less than 1% (2/459) of hysterectomy-treated patients in a non-randomised comparative study of 1108 patients. Uterine infection was reported in 2% (28/1387) of patients in one of the registers (there were significantly fewer infective complications after discharge in patients who received prophylactic antibiotics compared with those who did not; figures not provided).

Adverse events reported in the literature include uterine infarction, bladder and vulval damage, ovarian damage, post-Embolisation syndrome, pain, vaginal discharge and premature menopause.

Immediate
Haematoma, arterial thrombosis, dissection, pseudoaneurysm.

Early
- Post Embolisation syndrome.
- Pain, nausea, fever and flu like symptoms. Raised CRP / WCC. This is usually controlled with analgesics for 5 – 7 days after the procedure.
- Prolonged need for Analgesics and NSAIDs and deteriorating symptoms may indicate infection.

Late (>30 days and up to 4 years)
- Self-limiting non-offensive vaginal discharge, common.
- Fibroid expulsion (sub mucous) usually expectant management.
- Reduced ovarian reserve (in common with hysterectomy)
- Infection 0.5% of cases endometritis.
- Rarely septicaemia and emergency hysterectomy (maybe difficult surgery)

The Procedure

Referral

USS pelvis to confirm presence of symptomatic fibroids >=30mm
Prior to referral ensure that:

- Off GnRH agonists for at least 2 months
- Exclude PID (triple swabs in GOPD or preadmission)
- Advice on adequate contraception before the procedure
- Pipelle endometrial biopsy in women over the age of 45 or 40 with irregular bleeding

If you would like an opinion, the patient should be referred by letter to an Interventional Radiologist with a request for an MRI at the time of referral.

Based on the MRI findings the radiological decision for or against UFE is made. The Radiology Consultant will discuss the procedure with the patient and if acceptable, give a date for the same and inform the gynaecology team of the decision in a letter to the referring consultant, copied into the GP and the referring gynaecologist's secretary will arrange a bed on Lavender Gynae for the admission date and book a preadmission appointment. If the patient is referred from The Alexandra Hospital please inform Julie Patrick who will arrange admission.

Preadmission clinic

IUCD to be removed before the procedure, either in clinic or on the day of surgery

Ensure that it is clear that on the day of admission:

- 6 hours **nil by mouth**
- Urinary catheter to be inserted on the ward by Gynae SHO or ward staff
- Prescribe
  - PCA,
  - Analgesia – Diclofenac 100mg suppository 2 hour before the procedure
  - Antiemetic
  - Standard surgical prophylaxis antibiotics as per WAHT-PHA-001
  - Co-amoxiclav IV 1.2g (follow trust guidance if confirmed history of anaphylaxis to penicillin)
  - Cefuroxime IV 1.5g with metronidazole IV 500mg

Generally the patient is likely to stay for one night in the hospital and would be discharged the following afternoon. This could be delayed if there is persisting pain.

Every effort should be made to avoid treatment in an early pregnancy. UFE can be carried out at any stage of the cycle if adequate contraception has been used alternatively the procedure should be carried out in the first half of the cycle. A negative pregnancy test is essential.

On the day of admission

- Urinary pregnancy test
- Consent to be taken by Interventional Radiologist
- IV access by ward SHO
- Antibiotics – as above
- Analgesia – as below
- PCA to be setup in the ward before the patient comes to IR room.

Pain after Uterine Fibroid Embolisation

Following UFE most patients feel pelvic pain, cramping, nausea and possibly fever. The pain is usually biphasic with the first 2-6 hours of intense pain followed by a second phase of mild to moderate pain that may last for few days. The pain associated with this procedure is best managed by multimodal analgesic combinations due to the variability of the presentation. The initial phase usually requires intravenous analgesics. The pain is treated by starting non-steroidal drugs 2 hours before procedure and morphine PCA attached to an IV cannula before procedure.

The risk/ benefit ratio of using NSAIDS should be considered in patients with history of asthma, peptic ulcer disease and in renal insufficiency.

Day of procedure:

- Ibuprofen 400mg or diclofenac suppositories 100mg PR 2 hours before procedure
- PCA morphine connected to patient IV cannula before procedure
- IV paracetamol 1gm during procedure (if <50kg 15mg/kg IV)
- IV Ondansetron 4mg during procedure

Post procedure

- Continue PCA morphine
- Regular IV oral Paracetamol 1gm 6 hourly (if <50kg 15mg/kg IV)
- Regular Ibuprofen 400mg PO 8hourly
- IV Ondansetron 4mg 8hourly PRN
- IM Cyclizine 50mg 8 hourly PRN
- Ensure adequate hydration

Day 1

- Reassess pain score. Stop PCA Morphine
- Add Codeine phosphate 30 -60mg PO 6hrly PRN
  Or
  Add Tramadol 50 -100mg PO 6 hourly PRN

  Continue
- Regular /PO Paracetamol 1gm 6 hourly
- Regular Ibuprofen 400mg PO 8hourly
- IV Ondansetron 4mg 8hourly PRN
- IM Cyclizine 50mg 8 hourly PRN

Discharge Medications advice

- Regular PO Paracetamol 1gm 6 hourly 4 days
- Regular PO Ibuprofen 400mg PO 8 hourly after food for 3 days
- Codeine phosphate 30 mg 1 to 2 tablets 6 hourly as and when needed
- Buccastem (buccal prochlorperazine 3mg) 1-2 tablets 12 hourly as and when needed for nausea/ vomiting
- Consider Tramadol 50 mg 1 to 2 tablets 6 hourly PRN as an alternative to codeine if pain not relieved by the above combination

In patients not tolerating tramadol, it should be substituted with Morphine 10-20mg PO, 4hourly PRN
With this regimen we expect most patients to be discharged the day after procedure. Rarely a second night of hospital care is needed for pain control.
There will be a small proportion of patients who might need stronger analgesics due to chronic pain or post embolization syndrome. We may have to consider regional anaesthesia such as an epidural and alternative discharge medications including oxycodone. In this scenario the patient management should be planned well ahead in liaison with the anaesthetists involved.

Follow up
6 month appointment GOPD following pelvic ultrasound (Ultra sound will be booked by radiology) If still symptomatic after 12 months consider MRI in discussion with Dr Vijay.

If the patient complains of increasing pain / malaise / offensive discharge; she is to be referred to on-call gynae team by her GP.