Uterine Artery Embolization (UAE)

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INTRODUCTION

UAE is a non surgical treatment option for premenopausal women with fibroids (Uterine Leiomyomas: benign tumors of the uterus). Symptoms include abnormal bleeding, pelvic pressure, pain and problems with reproduction. The incidence of fibroids in premenopausal women with self-reported prevalence of uterine fibroids ranges from 4.5% (UK), reaching 9.4% (UK) to 17.8% in the age group of 40-49 years.

Uterine fibroid is a common concern in women at fertile age causing multiple bleeding and pain symptoms which can have a negative impact on different aspects in women’s life. The modalities of imaging include MRI - which is the standard imaging tool and Pelvic Ultrasound scan.

CLINICAL CASE

Here I describe a case of 48 year old woman who presented to clinician with symptoms of menorrhagia and cramping abdominal pain for 2 years. She was initially treated with several medications with little success. Her pre-evaluation MRI showed a Large fibroid from the post myometrium, 12.14 cm in transverse diameter (fig.1 &2). She was offered the surgical option of Hysterectomy/Myomectomy and Uterine artery embolization (UAE). She opted for UAE (Fig3&4) and within 6months- 1 year saw improvement in her symptoms, with no bleeding or abdominal pain. Her subsequent follow up MRI showed a technical decrease in the size of the fibroid.

HYPOTHESIS

For uterine fibroid embolization (UFE), a catheter is passed into the distal portion of one of the uterine arteries via femoral access, under fluoroscopic guidance, followed by infusion of the embolizing agent (figure 2A-B). The infusion is continued until flow to the fibroids ceases leaving behind a small anterograde flow in the artery. The procedure is then repeated on the other uterine artery. This results in Bilateral embolization resulting in ischemic necrosis and hyaline/calcific degeneration of fibroids and therefore relief from symptoms.

ADVANTAGES OF UAE OVER TRADITIONAL TECHNIQUES

- It is a minimally invasive procedure performed under local anaesthesia
- Short duration of stay in hospital and good patient outcomes
- Success in terms of technical decrease in fibroid size and clinical improvement of symptoms is reasonably high 91%. 3
- The rate of complications compared to other surgical options and mortality due to septicaemia is less than 3%. 3

HOW THIS CASE INSPIRES ME

- Radiology as a highly evolving field of medicine with increasing contributions to diagnostic and interventional medicine and directly influencing improved patient outcomes
- Radiologist makes important patient decisions and guides clinicians in appropriate management.
- Intervention radiology in itself has several subspecialties and plenty hands on skills
- Several different imaging modalities to utilize for diagnosis and image guided interventions
- Advancements in Imaging technologies and equipment
- Advancements in MRI sequences and its increasing applications in various pathologies
- Advent of functional and molecular imaging
- Radiologist as a leader and a efficient communicator
- A bright future and a satisfying career

References

3. NICE guidelines