



Journal Article Review 'Nursing Care of a Patient Undergoing Uterine Fibroid Embolization in the Radiology Department'

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ABSTRACT: Uterine fibroid embolization (UFE) is a widely accepted option for the treatment of symptomatic uterine fibroids. This article provides an overview of the nursing care that was provided for a patient who underwent UFE in a radiology department in a large teaching hospital in the Republic of Ireland. This article provides background information on the pathophysiology of uterine fibroids and an overview of the selection criteria and contraindications, which were taken into account by the radiologist before determining that UFE was the best treatment for the patient. The care plan uses the NANDA International (formerly the North American Nursing Diagnosis Association) planning process and is presented in three phases, that is, preprocedure, intraprocedure, and postprocedure. The selected patient nursing care plan demonstrates the essential role of the nurse in a busy radiology department while highlighting the nurse's role in maintaining a safe environment for the patient. (*J Radiol Nurs* 2015;34:143-149.)

KEYWORDS: Uterine fibroid embolization; Uterine artery embolization; Nursing care plan; Radiology; Leiomyomata.

INTRODUCTION

Uterine fibroids are the most common benign uterine tumors occurring in women of reproductive age. They affect between 20% and 25% of all women and 40% of menstruating women (James & Ahn, 2010; Lumsden, 2010). Uterine fibroids are also known as leiomyomas. They are frequently asymptomatic, but when symptomatic in approximately 50% of cases (Istre, 2008), they can have a significant impact on a women's quality of life. Symptoms that women present with include heavy menstrual bleeding, pain, and bulk-related symptoms. Uterine fibroids have also been

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implicated in infertility and complications in pregnancy although the exact figure is unknown. Uterine fibroid embolization (UFE) also referred to as uterine artery embolization is a minimally invasive percutaneous image-guided therapy (Andrews, Spies, Sacks, & Worthington, 2009) to treat uterine fibroids, but when symptomatic. Uterine artery embolization (UAE) has also been used to treat gynecologic hemorrhage in a variety of clinical conditions, including postpartum hemorrhage, bleeding after cesarean section and bleeding after gynecologic surgery (National Institute of Clinical Excellence, 2013). During UFE, blood supply to the fibroid is blocked by embolic materials. An infarcted fibroid will eventually shrink and will be absorbed or expelled by the body.

Pathophysiology

The uterus is a hollow muscular organ that lies in the pelvic cavity between the urinary bladder and the rectum. The walls of the uterus are composed of three layers of tissue: perimetrium, myometrium, and endometrium. Blood supply to the uterus is by the uterine arteries, which branch from the internal iliac arteries (Vaugh & Grant, 2007). Fibroids often appear singular but most commonly appear in multiples, varying in size and location (Istre, 2008). Macroscopically, they are firm and round or oval-shaped tumors composed of smooth muscle bundles in a whorl-like pattern (Istre, 2008). They are classified according to their location within the uterus. Subserosal fibroids develop in the outer portion of the uterus. These fibroids can grow outwardly and may contribute to pain because of their size and added pressure on other organs (Ezzati, Norian, & Segars, 2009). Intramural fibroids are the most common uterine fibroids and develop in the uterine wall and expand but do not distort the endometrial cavity (Ezzati et al., 2009). Submucosal fibroids that develop in the uterine cavity are the less common type of fibroids and distort the endometrial cavity (Ezzati et al., 2009). Pedunculated fibroids occur when the fibroid grows on a stalk, resulting in pedunculated submucosal or pedunculated subserosal fibroids (Mutai, Vinayak, Stones, Hacking, & Mariara, 2015).

Treatment Options

UFE offers an alternative treatment to chronic hormonal therapy and traditional surgical treatments, such as hysterectomy and myomectomy, to women with symptomatic uterine fibroids. The Cochrane review compiled by Gupta, Sinha, Lumsden, and Hidy (2012) concluded that UFE appears to have an overall patient satisfaction rate similar to hysterectomy and myomectomy, while offering an advantage with regard to a shorter hospital stay and a quicker return to routine activities. However, UFE is associated with a higher rate of minor complications and an

increased likelihood of requiring surgical intervention within 2 to 5 years of the initial procedure (Gupta et al., 2012). Andrews et al. (2009) on behalf of the Task Force on Uterine Artery Embolization and the Standards Division of the Society of Interventional Radiology in the United States recommended that embolization is offered only to women with symptomatic uterine fibroid. Treatment selection depends on the position of the fibroids in the uterus and patient's opinion about the treatment plan.

Contraindications for UFE can be divided into absolute and relative contraindications. Absolute contraindications include a viable pregnancy, active untreated infection, and gynecologic malignancy. Active infection can lead to abscess formation and related septic complications. Relative contraindications include desire to maintain childbearing potential, coagulopathy, severe contrast material allergy, renal impairment, immune compromise, previous pelvic irradiation or surgery, and/or chronic endometriosis (Spies, 2011). Fibroid embolization carries significant risks, but these should be balanced against the risks of a surgical procedure. Potential complications are bleeding, hematoma, infection, sepsis, premature menopause, and fibroid expulsion (Spies, 2011).

Patient Presentation

This case focuses on a lady in her mid 40s who presented to her general practitioner with a 6 months' history of pelvic fullness, abnormal menstrual bleeding, and increased urinary frequency during day time. A diagnosis of uterine fibroid was established through the use of a pelvic ultrasound scan. The patient was referred to the gynecology department, where in turn she was referred to an interventional radiologist for an opinion with a view to performing a UFE. The patient had an outpatient consultation before embolization to evaluate and determine if embolization was clinically indicated.

Uterine artery embolization is offered only to patients with symptomatic uterine fibroids. Because symptoms associated with uterine fibroids can also occur with other diseases of the uterus, such as uterine malignancies, it is crucial that all patients undergo a preprocedural evaluation to confirm that the symptoms are caused by uterine fibroids (Andrews et al., 2009). Most patients present with symptoms, such as heavy menstrual bleeding; bulk-related symptoms including pelvic pressure, heaviness, or discomfort; abdominal bloating; urinary frequency or incontinence; ureteral compression; and rectal pressure as urinary frequency and pain (including pelvic, back, leg, and flank pain) (Andrews et al., 2009).

In addition to the initial ultrasound scan, a preprocedure pelvic magnetic resonance imaging (MRI) scan was performed, which showed a large dominant intramural mass in the anterior wall of the uterus.

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