

## Management of Urological Complications Secondary to Uterine Fibroids

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**Abstract :** Background: Uterine fibroids are a common benign gynaecologic neoplasm in reproductive-aged women. Fibroids may become symptomatic in a vast majority of nulliparous women. Their diagnosis and management are often coordinated between gynecologists, radiologists and urologists depending on the anatomical location, growth, size and the fibroids' sarcomatous evolution. Some patients may develop obstructive uropathy symptoms, either uni or bilateral secondary urethral obstruction causing hydronephrosis. Uterine artery embolization (UAE) has previously been shown to effectively resolve symptoms as well as relieve urethral obstruction and resolve hydronephrosis. UAE has now established itself as an organ-preserving and minimally invasive procedure in the management of symptomatic uterine fibroids. It is a safe and effective alternative to hysterectomy for resolving fibroid-related pressure symptoms. The case presented examines the clinical manifestations and impact of uterine fibroids on the urinary tract system. The therapeutic options to relieve the urological symptoms as well as preserve fertility are explored and presented. Case: The case is a 29-year-old Nepalese female admitted to the hospital with recurrent urosepsis with multiresistant organisms. This was on a background of an enlarged uterus (measuring 17cm x11cm) with multiple subserosal, intramural and exophytic fibroids- causing external ureteric compression. She had bilateral ureteric stents in situ and required bilateral right and left nephrostomies during repeated episodes of urosepsis and bilateral ureteric obstruction. The left nephrostomy was removed a month prior to admission, and her most recent CT KUB demonstrated hypofunctioning ureteric stents with bilateral hydronephrosis. Options of hysterectomy versus uterine artery embolization (UAE) were extensively explored. The patient was keen to preserve fertility. Risks associated with UAE, such as the expulsion of the submucosal component of the fibroids and the possibilities of sepsis in the setting of ongoing ureteric colonisation were particularly high. The patient opted to trial UAE even though the risks of recurrent hospital admissions with urosepsis were going to be particularly high. In the event, the uterus fails to shrink adequately enough to relieve the obstructed ureters, a hysterectomy would inevitably be required in the future. Day 3 post-UAE the patient developed fevers, was hypotensive and tachycardic post-receiving prophylactic meropenem and fluconazole pre embolisation. She was noted to have a CRP of 293 with the most recent urine culture during this time growing *Candida albicans*. The patient was recommenced on oral fluconazole and IV meropenem, with good effect. Her repeat renal tract ultrasound post-UAE showed ongoing marked left hydronephrosis relatively unchanged from the scan one month prior to the procedure; however, the right-sided hydronephrosis had resolved. The patient was discharged on a 2-week course of antibiotics. The patient will have a repeat renal tract ultrasound and MRI of the ureters to re-evaluate the degree of hydronephrosis and progress- this was unavailable at the time of abstract submission and will be presented at the conference. Conclusion: Fibroids are a common benign tumor of the uterus and can frequently impact the lower urinary system resulting in significant uropathy. They often enlarge and compress the urinary bladder, urethra and lower end of the ureters. The effectiveness of the UAE as a fertility-preserving option is described.

**Keywords :** uterine artery embolisation for fibroids, urological complications from fibroids, uropathy of fibroids, obstructive fibroid management

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