ONLINE EXCLUSIVE

Urology around the world: Myanmar

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In this article the author, a urologist from Myanmar, discusses the presentation, diagnosis and management of a condition common in his country.

Urethral orifice stones

Urolithiasis is one of the most common urological conditions, usually involving the kidneys, ureters and bladder [2]. The urethra is an uncommon site for urolithiasis [2]. However, urethral calculi are common in some regions of our country, Myanmar. Urethral orifice (urethral meatus) stones are more common in males, and are usually a urological emergency because the patient is unable to pass urine suddenly. Most of the urethral stones originate from the bladder and rarely upper urinary tract [1]. Patients with urethral orifice stones typically have a history of passing small stones or sediment with urine, but most do not seek medical help and present to hospital only when a stone becomes impacted at the urethral orifice with consequent acute retention of urine. Urolithiasis is also a common condition with an increasing number of emergency department visits [2].

Pathophysiology of stone formation

Many factors are involved in the formation of stones. Risk factors for formation of stones are crystalluria, socioeconomic factors, diet, occupation, climate, family history and medications [1].

Crystalluria is a known risk factor for stone formation [1]. The more crystal aggregates, the more chance of stone formation. Diet may contribute to stone formation; sodium rich diets may increase the risk, and renal stones are more common in affluent, industrialised countries [1]. Sedentary lifestyles, high-temperature working environments, and living in hot climates all increase the chance of stone formation. Patients with a family history of stones, long-term use of antacids and antihypertensive drugs, such as triamterene, are also associated with an increased risk of stone formation [1].

Clinical features

Patients with urethral stones present with sudden cessation of passing urine (acute retention of urine) or an incomplete sense of urination, penile pain with dysuria, burning sensation, bleeding during urination, frequent urination, and pain in suprapubic area and flank area [3,4].

Investigations

There are a number of investigations that urologists may need for the diagnosis of stones in the urinary system, such as urine and blood tests and different imaging modalities which could include x-rays, ultrasound and CT scans [1,4]. Some investigations are cheap but others are expensive. Therefore, the spot diagnosis for urethral orifice stones is useful for minimising costs; this includes a previous history of passing small stones or sediment in the urine, recent history of cessation of urination with acute retention, and, of course, patients also point out the stone at the urethral orifice.

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Management

Urethral orifice stones are diagnosed by history, physical examination and investigations [3,5]. There are many patients who have removed urethral calculi by themselves at home, and those who cannot do so usually have the stone impacted at the urethral meatus. So, these patients come to hospital with an emergency urologic condition. There is no specific prescribed approach to the treatment of urethral orifice stones. Management can vary with size of stone and adhesion with urethral mucosa [3]. It also varies with the location of the stone and associated urethral diseases [5]. In hospital, doctors reassure the patient and remove the stone by applying topical lidocaine gel and grasping the stone with haemostatic forceps [2,5]. Most of the urethral meatal stones can be removed by this method in my practice area (the western region of Myanmar). Some cannot be removed by using haemostatic forceps and so require meatotomy, because of impaction of the stone with urethral mucosa [4]. Also, a stone at fossa navicularis may also need surgery [3]. Some urethral stones can be pushed back to the bladder and removed by open or endoscopic surgery [5]. Health education to these patients is required to prevent recurrent stone formation.

Discussion

It is well established that stone size and location are the major determinant of spontaneous passage, with most calculi that are less than 5mm passing spontaneously and those which are more than 10mm unlikely to do so [2].

Myanmar is one of the developing countries and situated in the Southeast Asia region. There are a few urologists in the major cities of Myanmar. Many cities have no urologists and general surgeons provide care for emergency and elective urology procedures. Some areas have transportation difficulties and depend on domestic airlines to reach major cities. Therefore, patients with low socioeconomic class cannot get to major cities due to transportation and accommodation budgets. So, general surgeons provide urology care to these patients as best they can according to their knowledge and experience. Patients in rural areas tend to have a low level of education and knowledge of healthcare compared to the major commercial cities of Myanmar. Hence, these patients often do not pay much attention to their health. When doctors solve acute urinary retention due to a stone impacted at the urethral orifice, most patients happily go home and are not interested in coming back for follow-up management. The urethral stones have a risk of mucosal injury and subsequent urethral stricture which requires long-term follow-up [5].

Conclusion

Although there is limited literature on urethral stones, there are many patients with urethral stones in some regions of Myanmar, particulary the western areas. Most of these are anterior urethral stones at urethral meatus and can be removed by haemostatic forceps. A few patients require surgery due to the stone being impacted at the urethral meatus and adhered to the urethral mucosa. Not only urologists but also general surgeons provide urology care in Myanmar, particulary in the more rural and underserved areas. Even in urban areas most emergency care is provided by general surgeons.

References

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