



## “RENAL FAILURE DUE TO STONE FORMED ON A HAIRPIN IN URINARY BLADDER”-- CASE REPORT OF A RARE ENTITY

### Urology

<b>Uma Kant Dutt*</b>	M.Ch Senior Resident Department of Urology, Jawaharlal Institute of Post Graduate Medical Education and Reserach , Puducherry,India *Corresponding Author
<b>Sunil Kumar</b>	M.Ch Senior Resident Department of Urology, Jawaharlal Institute of Post Graduate Medical Education and Reserach , Puducherry,India
<b>Ramanathinam Manikandan</b>	Additional Professor and Head of Department , Department of Urology, Jawaharlal Institute of Post Graduate Medical Education and Reserach , Puducherry,India

### ABSTRACT

A foreign body in the urinary bladder is rare and in most cases are self-inserted. We present a case of renal failure in a 24 year old female due to stone formed on a hair pin as nidus in urinary bladder.

### KEYWORDS

Foreign Body, Renal Failure, Self- Insertion, Urinary Bladder

### INTRODUCTION

A foreign body in the urinary bladder is rare and in most cases are self-inserted. Most cases of self-insertion of foreign bodies are a result of autoeroticism, inquisitiveness or psychiatric illness.[1] Mostly of these patients present very late with complications due to the foreign body, such as lower urinary tract symptoms, hematuria, pain or swelling, extravasation, urinary tract infections or abscess formation.[2] We hereby present a case of renal failure in a 24 year old female due to stone formed on a hair pin as nidus in urinary bladder.

### CASE HISTORY

A 24 year old married female presented with bilateral leg swelling and decreased urinary output for two weeks . There was no history of recurrent urinary tract infection or pain abdomen or any lower urinary tract symptoms or hematuria. The patient was not a known case of Diabetes Mellitus, neurogenic voiding dysfunction or any psychiatric illness. On evaluation patient found in renal failure (serum creatinine 10mg/dl) and on X Ray abdomen a large stone was present in pelvic region with attached hair pin [ Figure 1]. On non contrast computer tomography of abdomen there was bilateral hydroureteronephrosis with large vesical calculus with hair pin as a foreign body [ Figure 2]. Patient underwent open cystolithotomy and stone was removed with attached hair pin to one end [Figure 3]. The renal parameters improved postoperatively to serum creatinine 1.5mg/dl.

### DISCUSSION

Bladder calculi account for 5% of all urinary tract calculi and rarely form spontaneously. The chances of having bladder stone in female still less due to short and straight course of urethra. The various causes include voiding dysfunction, urinary infection, bladder outlet obstruction or foreign body retention.[3] Foreign bodies in bladder may have different etiology such as iatrogenic, perforation from adjacent organs, via the urethra due to self insertion or the traumatic route.[4] Typical presentations include bladder outlet obstruction, urinary tract infection, hematuria, intermittent pain and urinary symptoms such as frequency, urgency and dysuria.[1]

Numerous authors have reported stone formation on a multitude of foreign bodies, such as intrauterine devices, surgical sutures, hair, wires, thermometer and artificial urinary sphincters.[5] There are very few cases reported of hairpin –induced large bladder calculus leading to renal failure.[5] In our patient, bladder calculi induced by the presence of a hair pin was the result of self insertion. She did not reveal any such history on detailed questioning. She was not a known case of psychiatric illness, though the psychiatric consultation was suggested to her after recovery.

### CONCLUSION

Foreign body–induced bladder calculi with renal failure is a diagnostic and therapeutic challenge. These can have atypical presentation and if not treated can lead to irreversible loss of renal function. If patients present with urinary symptoms and vesical foreign bodies detailed psychiatry history should always be considered still urological evaluation should be considered to rule out vesical foreign bodies.

### Legends of figures:

1. X Ray abdomen showed a stone in pelvic region with attached hair pin
2. NCCT abdomen scan showed bilateral hydroureteronephrosis with large vesical calculus with hair pin
3. Stone with attached hairpin



FIG 1

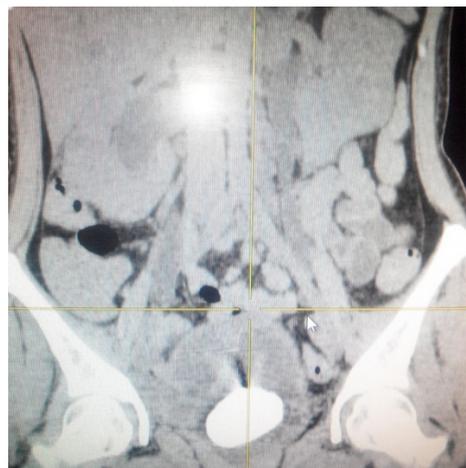


FIG 2

**FIG 3****REFERENCES**

1. Loeser A, Gerharz EW, Riedmiller H. Chronic perforation of the urinary bladder by self-inserted foreign body. *Int Urogynecol J Pelvic Floor Dysfunct* 2007; 18:689-90.
2. Kamal F, Aaron T.D. Intravesical foreign body-induced bladder calculi resulting in obstructive renal failure. *CUAJ* 2008;2:546-48.
3. Jung-Tsung Shenb, Chii-Jye Wangb, Chun-Kai Chena, Mei-Yu Janga, Yii-Her Choua and ChunHsiung Huang. Foreign Body Stone in the Urinary Bladder: A Case Report. *The Kaohsiung Journal of Medical Sciences*. 2004; 20:90-91.
4. Van Ophoven A , deKernion JB .Clinical management of foreign bodies of the genitourinary tract. *JUrol* 2000;164:274-87.
5. Ghaffar A, Anjum MR, Ahmad R. Chronic renal failure secondary to a large vesical calculus formed on a neglected self introduced foreign body . *Nishtar medical journal* 2010 ;2: 124-26.