VESICAL CALCULI IN PROLAPSE

(A Report of 4 Cases)

by

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It is very uncommon to find cases of vesical calculi in the female, probably because the short and straight urethra in the female throws out the nuclei of stones in very early stages of development. In cases of cystocele there are chances that the residual urine may predispose to retention of such nuclei, which in course of time may develop into stones. Prolapse with cystocele is a common occurrence in elderly women; still vesical calculi are not common; the reason may be that residual urine is not allowed to collect for long by the patient pushing the prolapsed bladder up during the act of micturition. The active contractile power of the bladder also keeps the residual urine to its minimum avoiding stone formation. Yet, it is likely that we get cases of vesical calculi when the prolapse is of long duration. Very few such cases could be traced in the literature. Bhatt reported two cases, in addition to 6 which he traced from literature. Crossen has described in his text-book how a case of procidentia died of uraemia as a sequela of hydronephrosis and hydroureter, but he does not make mention of occurrence of stones. Percy Malpas has mentioned that vesical calculi can form in procidentia of long duration. We are publishing these cases because of rarity of the condition. As a matter of chance all these cases were in our wards simultaneously. We would like to add that in addition to infection and stasis of urine, one more predisposing factor also played a special role. Jamnagar being geographically situated in a stone-bearing area, it is being supported by facts that in all these cases stones were formed primarily in the bladder, as in none of our patients did we get history of renal colic, nor was there any evidence of stone in the upper urinary tract on radiological investigations in any of the cases and finally that the stones in all the cases were of mixed variety.

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Case 1

D. G., aged 50 years, was admitted to gynaecological ward on 17-6-'64 with a history of prolapse for 25 years and recurrent attacks of burning micturition, haema-

turia and retention of urine. She was a multipara and in menopause for 7 years, Her general condition was good. Blood pressure was 110/70 mm. of Hg. Systemic examination revealed nothing abnormal. On internal examination it was found that she had a third degree prolapse with cystocele of a considerable size and rectocele. There were areas of pigmentation on the anterior vaginal wall. Stones were palpable in the prolapsed bladder. The uterus was small and the prolapse reducible. Her Hb. was 13 gm.% and R.B.C, 3.8 mil./cu.mm. Urine examination showed albumin ++ together with a fair number of red blood cells and pus cells. Blood urea was 21 mgm.%. Plain x-ray of abdomen and pelvis did not show any calculus in the upper urinary tract. Intravenous pyelography was done. Kidney function was normal on both the sides. There was no evidence of back pressure. Ureters were dragged down and there were two faceted stones in the bladder.

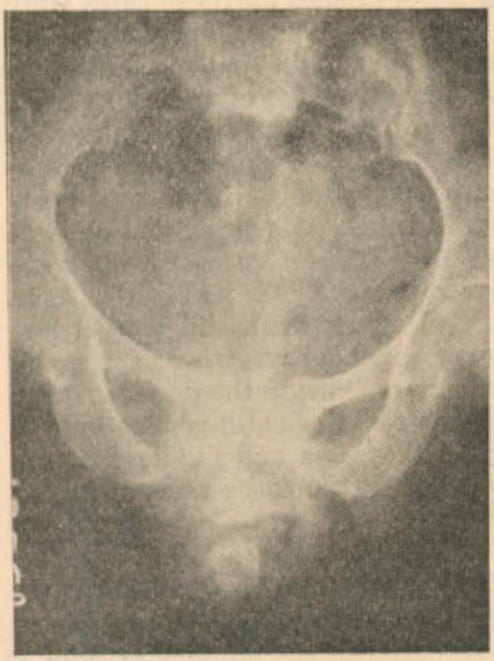
She was operated on 27-6-'64, and Mayo-Ward's vaginal hysterectomy with vaginal cystolithotomy was done. Three stones were removed. A catheter was kept in for 14 days and bladder wash given frequently. She was discharged on 24-7-'64 in good general condition.

Case 2

L. L., aged 60 years, was admitted on 9-6-'64 with a history of prolapse for 2 years. She c/o burning micturition and stress incontinence of urine. She was a multipara having had her menopause 8 years ago.

On general and systemic examination excepting a mild degree of hypertension — B.P. 150/90 mm. of Hg.—nothing abnormal was detected.

On internal examination third degree prolapse with cystocele and rectocele was seen. Uterus was small and atrophic, bladder was thickened and the prolapse was reducible. When the patient was being investigated she passed blood-stained urine on one occasion, hence, in addition to routine investigations, plain x-ray of abdomen followed by intravenous pyelo-



A Fig. 1 (Case I)

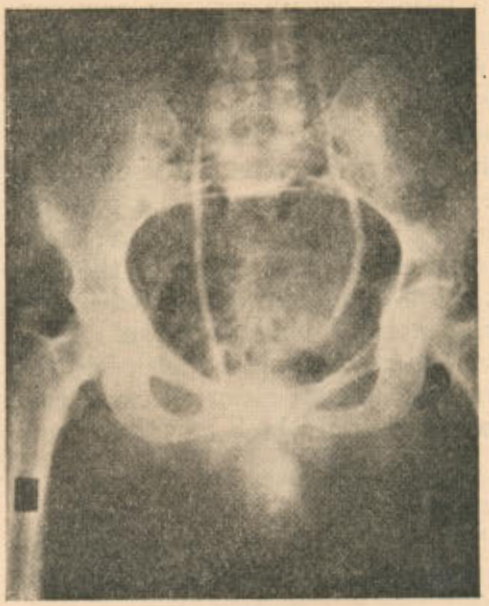


Fig. 2 (Case II)

graphy was done. These did not show any calculus in the upper urinary tract, and kidney function was normal on both sides, together with dragging effect on left ureter and a single stone in the bladder. Her Hb. was 9.2 gm.% and urine examination showed 1 to 2 pus cells per field. Subsequent examination of urine at the time when she c/o haematuria, showed plenty of red blood cells.

Mayo-Ward's vaginal hysterectomy with vaginal cystolithotomy was done on 26-6-'64 A catheter was kept in for 11 days and frequent bladder wash given. She was discharged in good general condition on 15-7-64.

Case 3

H. H., aged 50 years, was admitted on 26-5-'64 with history of gradually increasing prolapse for last two years. She had difficulty in passing urine with burning pain and attacks of haematuria off and on. She also gave history of passing stones per urethram. She was a multipara and had menopause for 8 years. General and systemic examination revealed nothing particular. On internal examination a cocoanut-sized procidentia was seen. The prolapsed mass was oedematous. Stones were palpable through the anterior vaginal wall. At the lower pole of the swelling the external os could be detected as a small dimple. The uterus could not be made out separately. On catheterization blood-stained urine was drained. The prolapse was irreducible. Her Hb. was 8 gm.% Urine examination showed plenty of red blood cell and pus cells. Blood urea was 20 mgm.%. Plain x-ray of abdomen and pelvis showed multiple stones in bladder. There was no evidence of stone in the upper urinary tract. It was decided to do the operation in two stages. She was operated on 29-5-'64 for vaginal cystolithotomy. Thirty-seven stones of varying sizes with gravel were removed. The largest stone was 3" x 2". Immediately after the operation the prolapse became reducible. Continuous catheter drainage was kept up for 14 days. Bladder wash was given frequently. As she was relieved of her urinary symptoms the patient refused the second operation for repair and had to be discharged against medical adivice.

Fig. 3 (Case III)

Case 4

K. K., aged 60 years, was admitted on 18-6-'64 with history of prolapse for 20 years, pain in abdomen for 8 days and burning micturition for 10 days. She also gave history of passing sandy material in urine. She had her menopause 8 years ago and had had one full-term normal delivery many years ago. On admission she was running temperature up to 102°F. Pulse was rapid; blood pressure and respirations were within normal limits. Systemic examination revealed nothing particular. On internal examination an irreducible prolapse was detected which was oedematous and tender. Stones were palpable in the bladder. With Trendelenburg position and continuous catheterization prolapse became reducible on the third day. Urinary infection was controlled by antibiotics. Her Hb. was 10 gm.%, and R.B.C. 4 mil./cu.mm. Urine examination showed red blood cells and pus cells in plenty. Two faceted stones were detected in the bladder on pyelography. The right kidney was

damaged and the left was found normal. Blood urea was 19 mgm.%. After improvement in her general condition the patient went away against medical advice refusing any operative line of treatment.

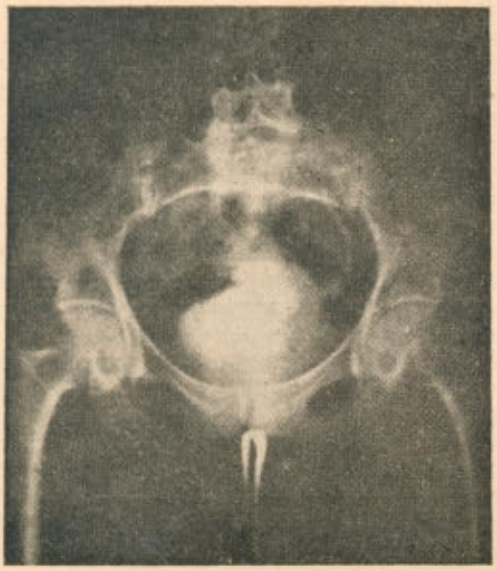
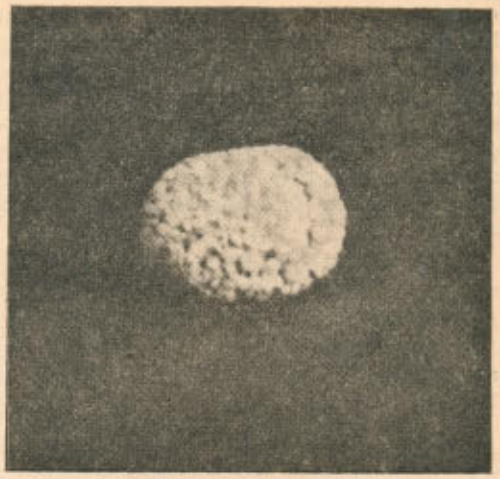


Fig. 4 (Case IV)
Photographs of x-ray showing stones in urinary bladder.

Fig. 5 (Case I)



(Fig. 6 (Case II)

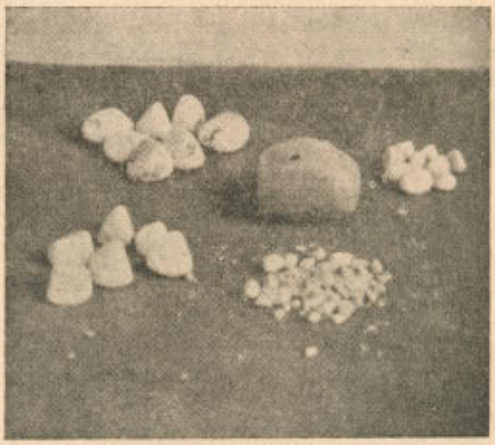


Fig. 7 (Case III)
Photographs of stones after removal.

Discussion

Four cases of procidentia with vesical calculi are presented. All four cases were elderly, postmenopausal, and parous. Procidentia was of more than 20 years' duration in two cases whereas two gave history of only two years' duration. This indicates that duration of prolapse dose not appear to influence the formation of vesical calculi. All had symptoms of prolapse and dysuria to-

gether with haematuria, whereas two cases also gave history of passing stones per urethram.

Two of these cases were operated upon for vaginal hysterectomy with repair and vaginal cystolithotomy at one stage. In the third case vaginal cystolithotomy was done as a first stage. The patient was discharged against medical advice as she refused the second operation. The fourth case refused any operative treatment. The first two cases were discharged in good general condition without any persistent urinary symptoms. This indicates that in fit cases where urinary infection can be controlled, one stage operation can be undertaken. Adequate drainage of the bladdder can be obtained by continuous catheterization. However, in the presence of uncontrollable urinary infection vaginal cystolithotomy should be done first followed by repair operation at a later date. There is minimum danger of fistula formation after primary closure of cystotomy opening if there is adequate drainage by continuous catheter together with antibiotic therapy.

The maximum number of stones obtained was 37 in one patient. This shows that stones can remain silent for a considerable time. In order to detect more and more cases complete urological investigations should be done in cases of prolapse. Routine sounding of bladder also helps in detecting vesical calculi.

Follow up of the above cases was not possible as neither did any of the cases report postoperatively, nor any information regarding any of them could be obtained by post.

Summary

1. Four cases of uterine prolapse with vesical calculi are presented.
2. It was found that in all cases the stones were formed primarily in the bladder.
3. The geographical situation of Jamnagar District in stone belt is suggested to have an aetiological bearing.
4. Routine sounding of the bladder to detect more and more cases is advocated.
5. Thorough investigation of urinary tract in cases of prolapse is also advocated.

Acknowledgement

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