GIANT PROSTATIC CALCULI ASSOCIATED WITH BENIGN PROSTATIC HYPERPLASIA : REPORT OF TWO CASES

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SUMMARY : True prostatic calculi are usually associated with prostatic hyperplasia, urethral stricture or chronic prostatitis. Generally they tend to be multiple and small in size. We present two cases of giant prostatic calculi associated with benign prostatic hyperplasia. Diagnosis was established by digital rectal examination and roentgenographic study. In the presence of large calculi, localized areas of stony hardness may be confused with prostatic carcinoma which is important for differential diagnosis.

Key Words : Giant Prostatic Calculi, Benign Prostatic Hyperplasia.

INTRODUCTION

True prostatic calculi are defined as calculi which develop in prostatic tissue or acini of the gland in order not to be confused with the so called false calculi, that may be urinary calculi lodged in a pouch of the urethra or in a dilated prostatic urethra (2). Its real frequency is not known and it is usually an incidental radiological finding. Generally prostatic calculi are multiple and small. Here we present 2 cases of giant prostatic calculi which is a rare condition.

CASE REPORTS

Case 1 : A 67 year old man presented with acute urinary retention who had prostatism symptoms for 6 years. Rectal examination revealed grade I prostate enlargement which had a hard consistency. Four days after rectal examination, serum prostate specific antigen was measured and found to be normal. Transrectal ultrasonography revealed a 75 g. prostate with multiple calsifications. In the intravenous urogram a horseshoe shaped shadow close to prostatic urethra and a large prostatic indentation were observed (Fig 1, 2). Preoperative panendoscopy revealed a trilobar hypertrophic prostate gland and no calculi was observed neither in urethra nor in bladder. Suprapubic transvesical prostatectomy was performed and prostate adenoma was digitally enucleated. Then using the stone grasping forceps a giant prostatic calculi could only be extracted in 3 pieces (Fig 3) (1.5x2 cm, 1x1.6 cm, 1.4x1.5 cm) from the adenoma bed. Patient was discharged one week after the operation. Pathological examination of the specimen established the diagnosis of nodular hyperplasia.

Case 2 : A 72 year old male patient presented with hematuria, nocturia, frequency ongoing for 5 months. He had a history of genitourinary tuberculosis. Rectal examination revealed a grade 0.5 prostate which had stony hard consistency. Four days after rectal examination serum prostate specific antigen was measured and found to be within normal

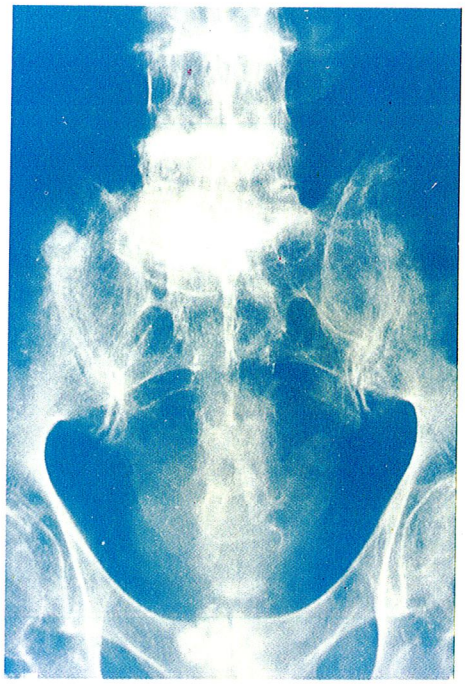

Fig - 1 : Plain abdominal X-ray showing horse-shoe shaped shadow around prostatic urethra location (Case 1).

Fig - 3 : Three pieces of prostatic calculi found in the prostatic adenoma bed (Case 1).

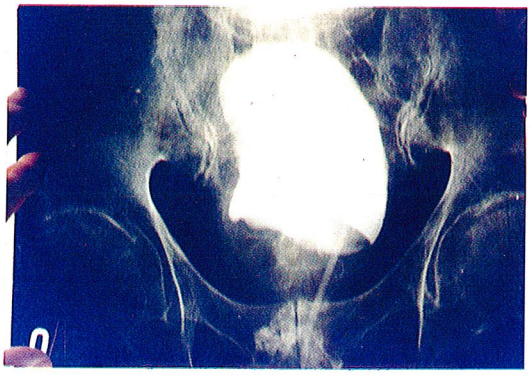

Fig - 2 : Intravenous urogram, cystogram phase. Prostatic indentation and horse-shoe shaped shadow around prostatic urethra location representing prostatic calculi (Case 1).

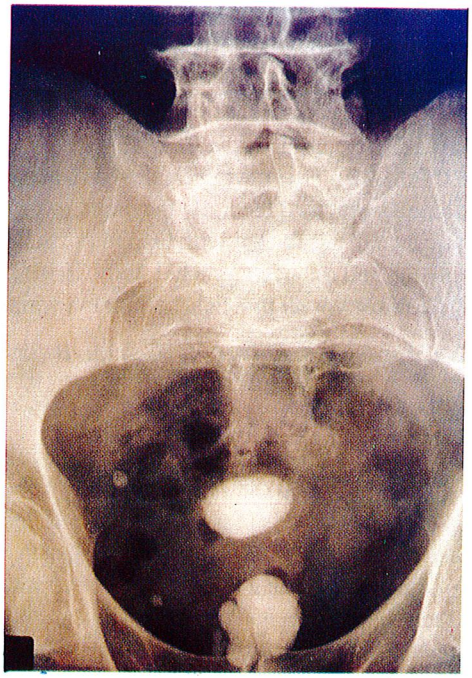

Fig - 4 : Plain abdominal X-ray showing ring shaped shadow around prostatic urethra location. An opacity related to an intravesical calculus is also present (Case 2).

limits. On transrectal ultrasonography prostate gland was 30 grams and intraparenchymal calcification sized about 2.5 cm an consistent with prostate calculi was noted. On pelvis ultrasonography an intravesical calculus was also present. At the intravenous urogram a ring shaped shadow around prostatic urethra, prostatic indentation and intravesical calculi were observed (Fig 4, 5). Suprapubic transvesical bladder neck resection with extraction of a large prostatic calculi in 2 pieces (2.5x1.5 cm, 1x1 cm) was performed (Fig 6). Patient was discharged on the 4th postoperative day and histopathological diagnosis was nodular hyperplasia.

DISCUSSION

True prostatic calculi are formed by deposition of calcaneous material on corpora amyclacea which are small round or ovoid bodies present in al-

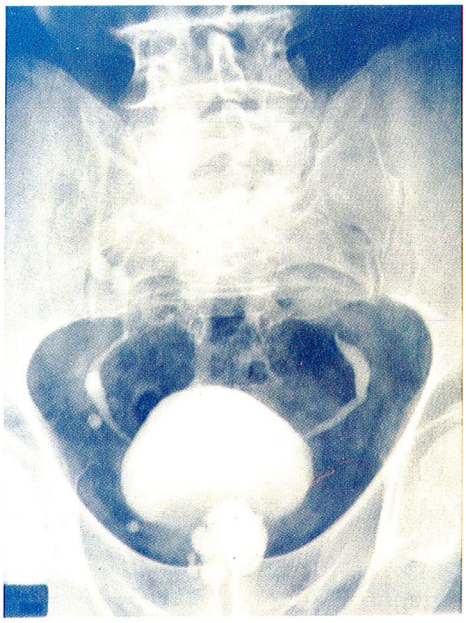

Fig - 5 : Intravenous urogram, cystogram phase. Prostatic indentation and ring shaped shodow around prostatic urethra location representing prostate calculi (Case 2).

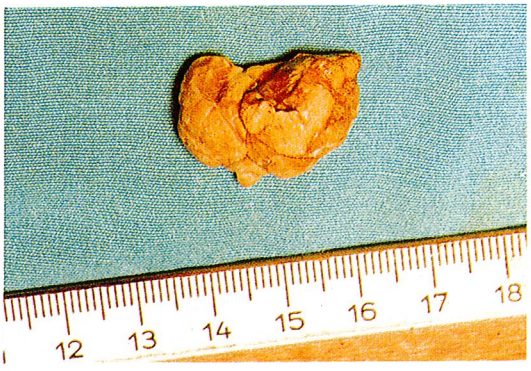

Fig - 6 : Half of the prostatic calculi extracted from prostate gland (Case 2).

veoli of prostate gland. As most prostate calculi are diagnosed as an incidental finding during radiological examination the frequency is not known (2). These calculi are rare in men youger than 40 years old. Majority occur in man aged 50-60 years (2). It is rarely observed in boys (2, 5). Prostatic calculi are usually associated with prostatic hypertrophy (2, 4), urethral stricture (2, 4, 5) and chronic prostatitis (1, 6, 7, 8). Apart from an incidental finding on radiological examination when associated with above mentioned entities, symptoms related to these disorders such as terminal hematuria, hematospermia, perineal pain, difficulty in voiding, urethral discharge may be present.

On rectal examination the consistency of the gland and its contour will vary (as noduler; firm or hard). In 18-22 % of the cases nodules are palpable which may be confused with prostatic carcinoma (2). In the presence of carcinoma, the gland is usually fixed in contrast to freely movable prostate gland in presence of calculi. Also the absence of crepitance and invasion of seminal vesicles occurring in prostate carcinoma is helpful in diagnosis. Transrectal ultrasonography is another means of diagnosis, but in cancers arising from the transitional zone, differentiation from prostatic calculi may be difficult because of poorer image resolution (3). Roentgenographic study usually confirms the diagnosis. Diffuse, ring or horse-shoe shaped shadow of prostatic calculi is present at the gland location. In asymptomatic cases no treatment is indicated. In presence of benign hyperplasia and large stones suprapubic removal is advocated. In patients with chronic prostatitis presence of prostatic calculi is a complicating factor and removal of calculi is advised in cases which are refractory to antibiotic treatment (6, 7,8).

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