Prostatic Cyst : Association with Autosomal Dominant Polycystic Kidney Disease

Lt Col AK Hooda*, Lt Col S Sanga⁺, Brig N Raychaudhury[#], Col AS Narula**

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Introduction

Cystic lesions in the prostate could be congenital or acquired. Though asymptomatic in most cases, it is associated with recurrent urinary tract infection and outflow obstruction. Prostate cyst occurring as an extra-renal manifestation of Autosomal Dominant Polycystic Kidney Disease (ADPKD) is very rare. We report a case of asymptomatic prostatic cyst in a patient of ADPKD, detected incidentally on transabdominal ultrasonography.

Case report

A 37 years old male presented with strangulated right sided inguinal hernia for which he underwent an emergency surgery. Evaluation during hospitalisation revealed hypertension with blood pressure of 160/100 mm of Hg and bilateral ballottable kidneys. He had no history of flank pain, dysuria, haematuria, passage of stones per urethra or gravelluria. His father had died 14 years ago due to renal failure probably due to ADPKD at the age of 48 years. There was no history of renal disease in his mother, siblings or uncles. He was married and had 2

children. Digital rectal examination showed normal prostate with no tenderness. Laboratory investigations showed haemoglobin of 13gm%, blood urea 38mg%, creatinine 1.0mg% and normal levels of prostate specific antigen. Urine examination showed no proteinuria and no cells or casts. Urine culture was sterile. His chest radiograph and ECG were normal. Transabdominal ultrasound showed bilateral enlarged kidneys with multiple cysts (Fig. 1). The prostate measured 51 X 25 X 32 mm and there was a 10mm diameter cyst within it (Fig. 2). There were no cysts in any other organs. Regular follow-up over the next two years has shown no deterioration of renal function and no increase in the size of the cyst in the prostate.

Discussion

ADPKD is an inherited disorder, which usually manifests in adulthood and is characterised by the development of multiple renal cysts invariably associated with extra-renal (mainly hepatic and cardiovascular) abnormalities. The disease may be revealed by a renal or extra-renal complication discovered on routine clinical

Fig. 1 : Abdominal ultrasound showing multiple cysts in the kidney

Fig. 2 : Ultrasound of prostate showing a 10 mm diameter cyst within it

*Classified Specialist (Medicine & Nephrology), Army Hospital (R&R), Delhi Cantt, **Associate Professor, Department of Medicine, Armed Forces Medical College, Pune, ⁺Graded Specialist (Radiology), Military Hospital, Allahabad, [#]Consultant (Medicine & Nephrology), Command Hospital (Southern Command), Pune.

examination, or incidentally on abdominal ultrasound or CT scan. Renal involvement may be totally asymptomatic at an early stage. Renal manifestations in ADPKD are pain, bleeding, infection, calculus, hypertension and renal failure while extra renal manifestations include cysts in other organs, cardiac valvular lesions, intra cranial aneurysms and predisposition to hernias [1]. Our case was diagnosed to be as having ADPKD when he presented with strangulated inguinal hernia and evaluation showed hypertension and multiple cysts in both kidneys.

Liver cysts are the most frequent extra renal manifestations which develop later than renal cysts and are usually asymptomatic. About half of adults with ADPKD have multiple cysts of the liver and the prevalence increases with age to 75% or even 90% in patients, whose life is prolonged by renal replacement therapy [2]. Epidermal cysts in organs other than the liver are less common. About 10% of patients have cysts in the pancreas, fewer than 5% have cysts in the spleen and about 5% have arachnoid cysts. Cysts of the seminal vesicle and epididymis are even less common [3,4,5] while prostate and testicular cysts are definitely rare [6]. Till date, only one case of prostatic cyst in a patient of ADPKD has been reported from India [7]. We report another such case of asymptomatic prostatic cyst associated with ADPKD. Most of the cases with seminal vesicle or prostatic cysts are asymptomatic, as in our patient. Some cases may have irritating or obstructive voiding symptoms and rarely haemospermia. Though described in some reports, the association of seminal vesicle and epididymal cysts with infertility in patients with ADPKD has not been convincingly proved [6,8].

This case had no evidence of any congenital anomaly of the genito-urinary tract or any disease other than ADPKD which are associated with prostatic cysts. He remained asymptomatic over a follow-up period of 2 years with preserved renal function and his hypertension was well controlled on enalapril therapy. He did not develop cysts in any other organ during the follow-up period and the prostatic cyst did not increase in size.

Conflicts of Interest

None identified

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