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Letter to the Editor

Neglected posterior urethral valve: Cause of irreversible renal damage and end-stage renal disease

Dear Editor,

The common cause of chronic kidney disease (CKD) in children world over is congenital anomalies of kidney and urinary tract (CAKUT).¹ Among CAKUT obstructive uropathy, mainly posterior urethral valves in male children account for most of the cases that progress to end-stage renal disease (ESRD).² With increasing number of expectant women undergoing ultrasounds (USs) to pick up congenital anomalies, most cases are picked up antenatally and operated in early postnatal period.

This is however sadly not a universal phenomenon in our patient clientele despite the availability of infrastructure and technical expertise in Armed Forces service hospitals. Various factors such as soldiers posted in non-family stations preferring to keep their families in villages and women going to their hometowns for delivery perhaps contribute. In the last

calendar year, three male children presented at ages of 3, 10, and 12 years, respectively, with urosepsis and high creatinine levels with an underlying diagnosis of posterior urethral valves (PUV) which had been missed so far. They also had metabolic acidosis, growth failure, and scarred kidney on dimercaptosuccinic acid scan. The 3-year-old child's mother had undergone an antenatal US at 28 weeks period of gestation which was apparently reported normal, and the other two children did not have any antenatal US records whatsoever.

This highlights the importance of high clinical suspicion on the part of every Armed Forces doctor to evaluate the male children who reach the military hospitals first time at varying ages with urinary symptoms like recurrent urinary tract infections, poor urinary stream, dribbling, and nocturnal enuresis and also those children who have failure to thrive, short stature, and/or hypertension without any other obvious

Fig. 1 – (a) The Ultrasound image. (b) Micturating cystourethrography showing elongated posterior urethra with thickened bladder wall characteristic of posterior urethral valves. The Micturating cystourethrography images also show high grade reflux on the Rt. ultrasound.

cause. These have been shown to be the most common symptoms and signs of missed posterior urethral valves in male children in developing countries. Long-term studies in children with PUV clearly show that delay in diagnosis and therefore the relief of obstruction lead to poorer renal and overall outcomes³ with nadir creatinine been shown as an independent predictor of renal outcomes.⁴

Also these children need close follow-up even post-operatively for bladder dysfunction, metabolic abnormalities, hypertension, and renal functions to halt or at least retard the progress to ESRD.⁵

Therefore, through this esteemed journal with reach to medical officers and specialists in the remotest of military stations, the authors would like to draw attention to this not so rare congenital anomaly and emphasize the need for early diagnosis using US of the kidney and urinary bladder with a micturating cystourethrography (MCU) and compare with standard guidelines for the same⁶ (Fig. 1). This will hasten referral of children with nonspecific urinary complaints and failure to thrive to a center where they can be evaluated appropriately and managed.

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