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BLADDER FUNCTION IN CHILDREN WITH POSTERIOR URETHRAL VALVE, MULTICENTER STUDY

Hypothesis / aims of study
Posterior urethral valve is a leading cause of bladder dysfunction. After valve fulgeration, majority of children maintain voiding symptoms, attributable to multiplicity of pathologic entities. Urologic literature is lacking detailed description of these entities
Study design, materials and methods
53 children were evaluated. 30 of them were seen in center1, and 23 were seen in center 2. Mean age was 7.72 (Range: 4-16 years). Evaluation included clinical examination, Renal US, VCUG and filling and voiding cystometry. Urodynamic testing was performed at a mean of 3.9 days (range 1-10 days) after fulgeration of the valve. 6 F double lumen catheter was used with a filling rate of 10-20 ml/minute (according to the expected capacity). Voiding was permitted when the child indicate maximum capacity is reached
Results
Children were presented with retention (14- 26.4%), difficulty (8- 15.1%), UTI (6- 11.3%), nocturnal enuresis (2- 3.8%). In the remaining 23 (43.4 patients, presentation was antenatal hydronephrosis. Renal US revealed unilateral backpressure in 17 (32.1%), bilateral in 25 (47.2%), no backpressure in11 (20.8%). Reflux was seen in 31 children (58.5%) of the study group. Mean bladder capacity was 276.9 ±135.3 cc (range 80- 800), while the mean expected capacity for the age was 291.5 ±96.4cc. Mean compliance was 16.9± 7.7 ml/cmH2O. In 31 (58.5%) children, overactivity was evident. In 7, leakage occurred during filling with a mean Detrusor LPP of 53.6 cmH2) (range: 22-110)
Interpretation of results
PUV affects both lower and upper urinary tract. Its tools in inducing negative effects range from high filling pressure to infravesical obstruction. Presentation in majority of cases was antenatal hydronephrosis. In those diagnosed postnatal, retention or difficulty accounted for 41.5% of cases.
Concluding message
PUV is associated with significant affection of urinary tract function. Affection of the kidney is evident in almost all patients. Back pressure (unilateral or bilateral) was seen in > 80% and reflux in more than 58%. Bladder capacity tends to be smaller with poorer compliance than expected for the age. Overactivity was noticed in well above half the cases
References

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HUMAN SUBJECTS: This study did not need ethical approval because Part of routine work but followed the Declaration of Helsinki Informed consent was obtained from the patients.