Renal Osteodystrophy Secondary to Congenital Bilateral Ureteropelvic Junction Obstruction

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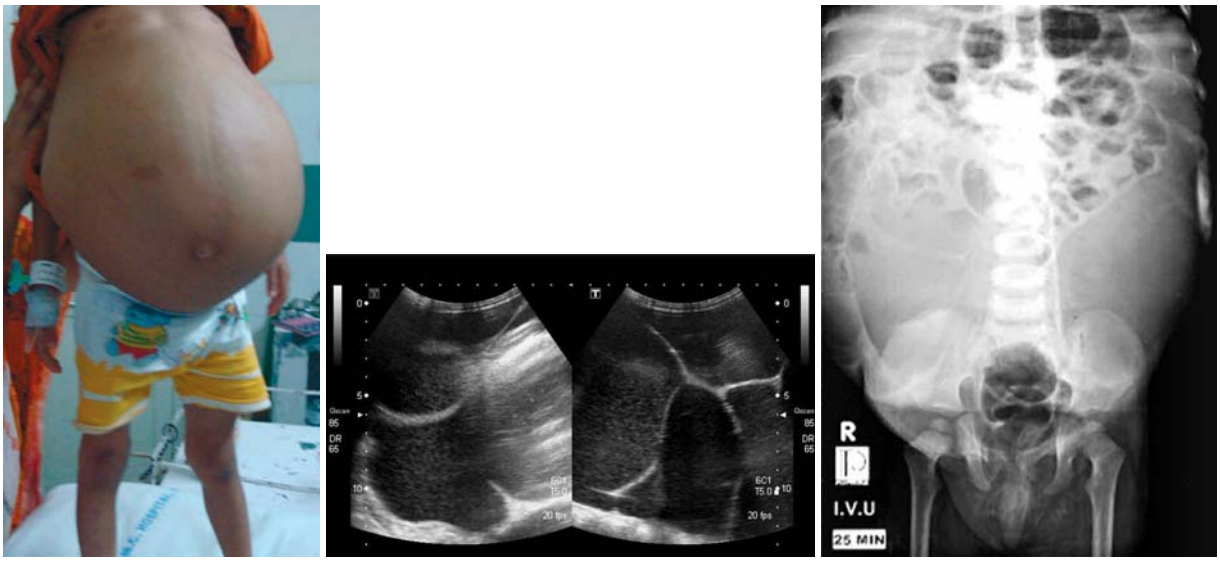

A 4-year-old girl presented with progressive distension of the abdomen and bowing of the legs (genu valgum) since birth. She was anemic, with a blood pressure of 180/110 mmHg. The serum level of creatinine was 1.7 mg/dL. She had hypocalcemia, and elevated serum level of phosphorous and parathyroid hormones. Ultrasonography revealed bilateral grossly hydronephrotic kidneys with thinned out parenchyma. Intravenous urography showed impaired renal function with stasis of contrast media and non-visualization of the ureters.

A diagnosis of bilateral congenital ureteropelvic junction obstruction with renal osteodystrophy was made. Her blood pressure was controlled with two antihypertensive agents and she was started on calcium and vitamin D supplements along with phosphate binders. Bilateral percutaneous nephrostomies were placed with a hope to improve her renal function. However, her serum level of creatinine failed to improve.

She underwent a dismembered Anderson and Hynes pyeloplasty along with reduction of the massively dilated pelvis on the right side. As the ureter was found to be atretic on the left side, a pyelocystoplasty was performed. At discharge, her serum level of creatinine remained stable at 1.7 mg/dL. Her parents were educated regarding the various options available for renal replacement therapy, including pediatric renal transplantation.

Congenital anomalies of the kidneys and urinary tract are a major cause of chronic and end-stage renal failure in children.[1] "Renal osteodystrophy" describes the skeletal complications seen in end-stage renal disease and results from a multifactorial disorder of the bone remodeling.[2]

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