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Giant Congenital Megaureter Presenting with Progressive Abdominal Distension in a Neonate

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Description

A twenty-two-day-old male neonate was transferred to a tertiary pediatric surgical center because of progressive abdominal enlargement and feeding intolerance since birth. The infant had been delivered at thirty-eight weeks of gestation through uncomplicated vaginal delivery with a birth weight of 3.1 kilograms. Antenatal ultrasonography during the third trimester had demonstrated right-sided hydronephrosis, although postnatal imaging was delayed because the newborn initially appeared clinically stable.

During the second week of life, the parents observed increasing abdominal fullness associated with poor feeding and occasional nonbilious vomiting. Local physicians initially suspected gastrointestinal distension. However, worsening abdominal enlargement and reduced urine output prompted referral for specialized evaluation. At admission, the infant appeared mildly dehydrated and irritable. Body temperature remained normal. Physical examination demonstrated marked right-sided abdominal distension extending across the midline. A soft cystic mass occupied much of the lower and central abdomen. Bowel sounds were present, and no abdominal rigidity was identified. External genital examination appeared normal.

Laboratory investigations revealed mild elevation of serum creatinine for age together with metabolic acidosis. Urinalysis demonstrated microscopic pyuria without bacterial growth on culture. Ultrasonography identified severe right hydroureteronephrosis with a massively dilated tortuous ureter measuring approximately 4.8 cm in maximal diameter. The ureter extended inferiorly into the pelvis and displaced adjacent bowel loops. The right renal pelvis was markedly enlarged with thinning of the renal cortex. The left kidney appeared normal.

Voiding cystourethrography excluded vesicoureteral reflux and posterior urethral valves. Magnetic resonance urography demonstrated a giant obstructive primary megaureter with distal narrowing near the ureterovesical junction. The ureter occupied a substantial portion of the abdominal cavity and compressed neighboring intestinal segments. Nuclear renal scintigraphy revealed impaired drainage and reduced differential renal function of 28% on the affected side.

Despite intravenous hydration and gastric decompression, the infant continued to experience feeding intolerance and progressive abdominal distension. Surgical intervention was therefore considered necessary because of obstructive deterioration and mechanical compression of abdominal structures. Under general

anesthesia, a right lower abdominal transverse incision was performed. Intraoperative exploration revealed a massively dilated ureter extending from the renal pelvis to the bladder. The ureter contained a large volume of stagnant urine and demonstrated thickened walls from chronic distension. Distal ureteral narrowing near the bladder insertion confirmed the site of obstruction.

Because of the infant's age and significant ureteral diameter, temporary cutaneous ureterostomy was selected rather than immediate ureteral reimplantation. The dilated ureter was decompressed, and a proximal loop ureterostomy was created to permit urinary drainage while allowing stabilization of renal function and growth before definitive reconstruction. Following surgery, urine output improved rapidly, and abdominal distension decreased noticeably within several days. Enteral feeding resumed gradually without recurrent vomiting. Serum creatinine values normalized during postoperative observation. The patient was discharged after ten days with appropriate stoma care instructions for the parents.

Primary obstructive megaureter represents a congenital anomaly characterized by functional narrowing of the distal ureter leading to progressive proximal dilatation. Although many cases identified antenatally improve spontaneously, severe forms may produce urinary obstruction, infection, or compromised renal development requiring intervention. Giant megaureter causing marked abdominal distension in the neonatal period remains uncommon.

Ultrasonography served as an effective initial diagnostic tool because it demonstrated extensive ureteral enlargement and renal involvement without radiation exposure. Additional imaging through magnetic resonance urography provided detailed anatomical assessment and clarified the absence of alternative obstructive lesions. Functional evaluation using renal scintigraphy assisted operative decision-making by identifying compromised but recoverable renal tissue.

Management of neonatal obstructive megaureter depends on severity of obstruction, renal function, patient age, and symptom progression. Conservative observation may remain suitable in selected infants with preserved drainage and stable renal growth. In contrast, significant obstruction associated with declining renal function or compressive symptoms generally requires operative treatment. Temporary urinary diversion through cutaneous ureterostomy remains valuable in young infants with giant ureteral dilatation. Definitive ureteral reimplantation during the neonatal period may prove technically difficult because of small bladder capacity and disproportionate ureteral diameter. Diversion permits decompression of the urinary tract while allowing the child to grow before reconstructive surgery.

Conclusion

Long-term surveillance after megaureter repair includes monitoring renal growth, urinary drainage, and infection frequency. Although many children achieve satisfactory outcomes, some may develop recurrent obstruction or vesicoureteral reflux requiring additional management. Continued follow-up throughout childhood therefore remains advisable. A rare case of giant congenital obstructive megaureter presenting with progressive abdominal distension and feeding intolerance in a neonate. Temporary cutaneous ureterostomy followed by delayed ureteral tapering and reimplantation achieved recovery of renal function and resolution of compressive abdominal symptoms. Early recognition and staged surgical management contributed significantly to the favorable clinical outcome in this infant.