

Editorial Comment

The management of neonates with bilateral ureteropelvic junction obstruction (UPJ-O) is still a controversial issue. Some reports have recommended conservative management with close follow-up,^[1,2] whereas others recommended early surgery for high-grade hydronephrosis (Grades 3–4) according to the Society for Fetal Urology grading system, as it provided faster and reliable improvement.^[3,4] This discrepancy is related to the differences in the inclusion criteria. Lower grades of hydronephrosis showed a good outcome following conservative management; however, higher grades were proved to be better treated with early surgical reconstruction. This was also documented in recent studies on unilateral severe UPJ-O as delayed pyeloplasty was associated with lower renal function outcomes compared to early pyeloplasty.^[5]

The authors present one of the largest series on bilateral severe UPJ-O in neonates.^[6] Among the 28 children, 8 (28%) had associated vesicoureteric reflux (VUR). The VUR resolved on conservative management except in one child who required reimplantation 1 year after pyeloplasty. Although some studies reported no need to perform voiding cystourethrography for infants with unilateral asymptomatic hydronephrosis without dilated ureter as the incidence of associated reflux is low (5%) and usually resolves spontaneously, this is different for children with bilateral hydronephrosis as the incidence of VUR is higher and may affect the outcome.^[7]

The diagnostic follow-up in children with bilateral UPJ-O is complicated as we cannot rely on split renal

function (SRF). A stable SRF in these children may be true but also may denote worsening or improving of both sides at the same degree. The authors followed a reasonable protocol by depending on anteroposterior diameter of the renal pelvis (APD) as detected by ultrasound (US) in addition to single-kidney glomerular filtration rate (s-GFR) instead of SRF. On the other hand, there was no clear US data on parenchymal thickness although it has an important role in initial classification and follow-up during conservative management.^[2] Additionally, a 10% change for APD or s-GFR as a cutoff to diagnose impairment or improvement of function, is complicated by the possibility of errors during assessment. As an example, a decrease of 3 mL in s-GFR may be diagnosed as worsening in a child with 30 mL/min s-GFR although this difference is very small and could be produced by chance or error. However, this is ameliorated by standardization of the procedure and performing it at the same center.

The authors classified management according to the severity and presence of complications. Early pyeloplasty was performed within 1 month to manage six complicated cases. Simultaneous bilateral pyeloplasty (SBP) was performed for cases (3) presenting with urinoma or respiratory distress, while the remaining three cases (presenting with urinary tract infection [UTI]) were managed with unilateral pyeloplasty with contralateral double-J (DJ) stenting, followed 1 month later by pyeloplasty. For noncomplicated cases, unilateral pyeloplasty was performed for the worst side usually at the age of 4–12 weeks followed by conservative follow-up for the contralateral side. However, contralateral stenting was performed for ten renal units with Grade 4 hydronephrosis; seven of them required pyeloplasty at the age of 8–12 weeks. On the other hand, only 3/12 nonstented units (Grade 3 hydronephrosis) required late pyeloplasty (age of 1–3 years). Thus, 44/56 (78.5%) renal units required surgery; 41/44 (93.1% in Grade 4 and 3/12 [25%] in Grade 3). This was similar to what had been reported in some studies on bilateral severe UPJ-O as 88.9% of renal units with Grade 4 required surgery.^[3]

The authors explained performing stenting for the contralateral Grade 4 hydronephrosis to prevent the possibility of renal rupture and to help some renal units to recover without surgery. However, SBP is better for these children. Stenting will have no effect on the original pathology and will not cause recovery of the stented renal unit as proved in previous studies.^[3] Furthermore, it will delay the

subsequent intervention due to the period required for removal of stent followed by follow-up and then taking the decision of intervention. Stenting is also associated with the morbidity of increasing the number of operations. On the other hand, SBP offers early management in a single stage with a single admission and anesthesia, reduced cost in addition to reduced anxiety of parents that is exaggerated on exposure to multiple procedures in a short period of time. In addition, stenting following SBP could be better performed by transanastomotic external nephrouretero-stent. These stents could be removed on an outpatient basis and have the advantage of no irritation to the bladder. Furthermore, there is no risk for manipulation of the vesicoureteric junction which may lead to injury or at least edema and obstruction complicating the situation in these neonates.^[8] Similarly, SBP is better for the three cases which were managed early within the 1st month of life due to complications (UTI). Using SBP will save these children exposure to a surgery during the 1st month followed by contralateral surgery during the 2nd month then a third operation for removal of DJ during the 3rd month of life.

Mohammed Said ElSheemy*

Department of Urology, Faculty of Medicine, Cairo University,
Giza, Egypt

*E-mail: mohammedshemy@yahoo.com

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