CLINICAL RATIONALE
Dr. Gonzalo J. Vitagliano
MN 102.007 · MEDICAL DIRECTOR

MINIMALLY INVASIVE SURGERY · UMIBA

Laparoscopic pyeloureteral reconstruction

Pyeloureteral junction stenosis is the most common congenital ureteral disorder causing dilation of the pyelocaliceal system. When it is not treated in time, it leads to progressive deterioration and atrophy of the renal unit.1

ADVANTAGES OF THE TECHNIQUE

Clinical rationale

The “open or conventional” pyeloureteral reconstruction was originally described by Anderson and Hynes in 1943 and became the treatment of choice for this condition, with success rates above 90%. However, the high morbidity of this technique led urologists to develop less invasive therapeutic options.2

Various minimally invasive techniques have since been described to treat this condition, among them antegrade and retrograde endopyelotomy, balloon dilation, and endopyelotomy under radioscopic guidance. While these reduce the morbidity of open surgery, they do so at the cost of a markedly lower success rate, even with proper case selection (56 to 70%).3,4

In 1993 Schuessler et al.5 described laparoscopic pyeloureteral reconstruction, which reproduces the steps of open surgery and reaches a comparable success rate while reducing its postoperative morbidity, hospital stay, and recovery time. Today, laparoscopic pyeloureteral reconstruction is the treatment of choice for this condition.6

The advantages of this approach over conventional surgery are as follows.7,8

– Less postoperative pain. – Low complication rate (2 to 11%). – Smaller, more cosmetic incisions (3 or 4 incisions under 1 cm). – Shorter hospital stay (2.2 to 2.8 days). – Excellent long-term functional results (87 to 100%). – More precise surgery (visual magnification from the laparoscope). – Early return to work (about 15 days).

Laparoscopic pyeloureteral reconstruction is today the treatment of choice for this condition, since it achieves excellent long-term functional results, provided the surgical indication is appropriate and in keeping with the operating surgeon's experience.

1. Christopher GE. Minimally Invasive Treatment of Ureteropelvic Junction Obstruction: A critical Analysis of Results. Eur Urol. 2007; 52: 983-9. 2. O´Reilly PH, Brooman PJ, Mak S y cols. The long-term results of Anderson-Hynes pyeloplasty. BJU Int. 2001; 87: 287-9. 3. Brooks JD, KavoussiLR, Preminger GM y cols. Comparison of open and endourologic approaches to the obstructed ureteropelvic junction. Urology 1995; 48:791. 4. Meretik I, Meretik S y Clayman RV. Endopyelotomy: Comparison of ureteroscopic retrograde and antegrade percutaneous techniques. J Urol. 1992; 148:775. 5. Schuessler W, Grune M, Tecuanhuey L y cols. Laparoscopic dismembered pyeloplasty. J Urol. 1993; 150: 1795-9. 6. Symons S, Bhirud P, Jain V. Laparoscopic Pyeloplasty: Our New Gold Standard. J Endourol. 2009; 23(3): 463-7. 7. Jarret T, Chan D, Charambura T y cols. Laparoscopic pyeloplasty: the first 100 cases. J Urol. 2002; 167:1253. 8. Calvert R, Morsy M, Zelhof B y cols. Comparison of laparoscopic and open pyeloplasty in 100 patients with ureteropelvic junction obstruction. Surg Endoscop. 2008; 22: 411-14.

SEE THE PROCEDURE
umiba.org/procedures/ →

INQUIRIES AND APPOINTMENTS
umiba.org/contact/ →