

Percutaneous access for the correction of ureteral strictures after renal transplantation

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For many years, open operative reconstruction has been the standard intervention for the correction of ureteral strictures after renal transplantation, something which occurs in 2%–10% of all cases, adding significant morbidity and even mortality to the transplant procedure. The development of reliable methods of percutaneous access and of instruments specifically designed for it has brought a new dimension to interventional endourology in general urology and has, as a natural consequence, allowed for its application in renal transplantation, where an increasing number of case reports describe various techniques.

In obstructed renal transplants with decreasing function and pelvic dilation, ultrasound-guided percutaneous nephrostomy is the initial procedure of choice, allowing for functional graft recovery and anatomical localization of the stricture by pyelography. Prior to dilation, a guide wire is passed through the pelvis and ureter. The dilation itself can be done either by using a balloon catheter, as described in the paper by Benoit et al., or by introducing semirigid dilators according to the technique employed by Oosterhof et al., the latter requiring transurethral manipulation. After dilation, most sur-

geons introduce internal stents (pigtail or double J) and leave them in place for 4–8 weeks. Purely internal stenting seems to be as efficient and more comfortable for the patient than the use of an “external-internal” stent, as described by Oosterhof et al. The advantage of the latter method, however, is that the external stent may be replaced by a nephrostomy tube to check free passage after stent removal. The diameter of the stents should not be too wide, so as not to jeopardize ureteral blood supply.

Success rates after percutaneous dilation (45%–79%) seem to depend on the nature, length, and localization of the strictures. Confined stenoses and strictures of the ureterovesical anastomosis appear to give better long-term results than long strictures and obstructions of the ureteropelvic junction which, for permanent relief, more often require surgical intervention.

Actual experience suggests that dilation of ureteral strictures and temporary stenting should be the primary method of treatment for supravascular obstruction after renal transplantation. Open intervention should only be resorted to when endourologic dilation fails.