Antegrade Pyelography in Renal Allografts

D. Bach
T. Fueling
H. Lübke
B. Grabensee

Departments of aNephrology and bGastroenterology, University of Düsseldorf, FRG

Dr. med. Dieter Bach, Department of Nephrology, University of Düsseldorf, Moorenstrasse, 5 D-4000 Düsseldorf (FRG)

Dear Sir,

Acute rejection, acute renal failure, infection and operative problems are the most frequent complications in renal transplantation. All of them can cause postrenal obstruction. Most of the conventional imaging modalities used for diagnosis imply a high risk of infection (e.g. cystoscopy) in the highly immunized patient. Furthermore, systemic use of contrast-medium may decrease the already impaired renal function. Therefore, ultrasound-guided percutaneous antegrade pyelography is a safe diagnostic alternative providing detailed information in the investigation of ureteric obstruction [1–3].

We have applied this technique 11 times in 9 patients with renal allografts (5 males, 4 females, mean age 28.4 years) using a real-time scanner with a 3.5-MHz biopsy applicator. A 20-gauge fine needle was positioned under sterile conditions into the dilated pyelon. After aspiration of 20 ml or urine, approximately 20 ml of water-soluble contrast medium were inserted under radioscopic control.

There were no complications afterwards, except 2 short (<1 h) episodes of macrohematuria. In all cases, the suspected diagnosis could be confirmed, followed by surgical intervention in 7 cases. The most frequent cause for the ureteric obstruction was ureteric necrosis due to rejection. This very safe procedure has the advantage of exact localization of a ureteric stenosis, and does not produce any damage due to contrast medium or cause any infection.

References