Simple Technique for Bedside Peritoneal Dialysis in Neonates

S.	Solly	Mizrahi ^a
M.	Mila	Barak ^b
I.	Ida	Lunski ^a

^aDepartment of Surgery and ^bNeonatal Intensive Care Unit, Western Galilee Regional Hospital, Nahariya, Israel

Solly Mizrahi, MD Dept. of Surgery, Nahariya General Hospital, PO Box 21, Nahariya 22100 (Israel)

Dear Sir,

Premature kidneys are vulnerable and may require short-term peritoneal dialysis when in acute failure. A bedside procedure for the introduction of peritoneal dialysis catheters in four premature neonates weighing 800–1,200 g is described.

Technique. Under appropriate local anaesthesia and with strict sterile precautions, a midline transverse incision of 1 cm just below the umbilicus was performed. Using a skin hook, the linea alba was elevated, displacing it from the internal viscera. The catheter (Vigon Neonatal Chest Drain; with extra holes cut in its wall) was inserted by firm but controlled pressure and with a twisting motion. As soon as the catheter entered the peritoneal cavity, its tip was directed toward the pelvis. After withdrawing the obturator, the catheter was advanced into the pelvis and was fixed to the skin.

Intermittent flow of warm dialysis fluid, 120 ml/kg/h, was maintained using a paediatric volumetric infusion pump. The fluid was drained freely through a three-way tap into an accurate measurement systems. Minimal fluid leakage around the entrance of the catheter was observed.

Results. This technique was used for a period of 34–96 h. Two of the patients died, one of them following necrotizing enterocolitis and the other due to intracerebral haemorrhage. The dialysis was technically successful in all patients. Fluid and electrolyte balance was corrected and kidney function returned to normal.