Continuous Ambulatory Peritoneal Dialysis: Implantation of the Catheter

J.-F.		Marichal ^a
B.		Faller ^a
D.W.		Wagner ^b
G.		Frey ^b

^aDepartment of Nephrology and Haemodialysis, and ^bDepartment B of Surgery, L. Pasteur's Hospital, Colmar, France

D.Wagner, Department B of Surgery, L. Pasteur's Hospital, Colmar (France)

Sir,

Continuous ambulatory peritoneal dialysis (CAPD) requires a permanent access to the peritoneal cavity through a simple, safe and easy implantable device. The Zellerman-Oreopoulos (Z-O) catheter corresponds to these wishes. It differs from the permanent Tenckhoff catheter in having two silastic discs (1 mm thickness, 28 mm in diameter) at the intra-abdominal part and in the only 2.5 cm distance between the two cuffs. These features decrease the risk dis-lodgement but necessitate enlargement the abdominal wall incision. The surgical implantation is done under local or general anesthesia.

Since May 1978, in 38 CAPD patients, the peritoneal cavity access has been realized by the Z-O catheter. From May 1978 until July 1980, we implanted 19 of them in 12 men and 7 women, aged 54.0 on average (range 17–82). The implantation was infraumbilical and a 4-cm skin incision was done on the linea alba. The skin exit site was either in the right or in the left hypochondrium according to the patient's desire. A purse string round the peritoneal cuff was systematically done with the parietal peritoneum. During this period, we observed the development of an even-tration after 3 months of CAPD in 4 patients (3 men, 1 woman). These eventrations brought abdominal wrangling and discomfort to the patients. In one case, it reached the size of a grapefruit and, besides the esthetic point, was at the origin of a persistent peritonitis. The development of the eventration induced dislocation of the subcutaneous tissue and forced the cuff lying under the skin in the peritoneal cavity. In another case, the eventration was responsible for dialysate leaking at the skin exit site.

Because of these disadvantages, we actually implant the Z-O catheter through an upright, paramedian skin incision, a little higher than the umbilicus on the right or the left side. At this place, the peritoneum forms one piece with the deep fascia of the rectus sheet. It is less crumbly than the peritoneum of the linea alba and is not drowned in the pro-peritoneal fat. This arrangement allows an easier suture with an overcast stitch or an easier creation of a purse string round the peritoneal cuff. The solid tissues make the suture tight. From July 1980 to March 1981, we used this new catheter implantation technique in 19 patients (12 men, 7 women) aged 52.3 on average (range 14–78). With a 9-month setback, no parietal complications were observed.

The success of CAPD depends on taking care of the patient's comfort. The implantation of the peritoneal catheter does not have to bring complications. In our opinion the paramedian implantation seems to bring the best safe conditions to the patients.

References