Percutaneous PD catheter insertion after past abdominal surgeries

Sir,

The preferred method of initiating renal replacement therapy in developing countries is probably the percutaneous peritoneal dialysis (PD) catheter insertion technique.[1] However, this is seldom practiced in those with a history of previous abdominal surgery,[2] where laparoscopy is preferred, as adhesiolysis can be done if needed.[2] From Christian Medical College, Vellore, we report our experience of successful percutaneous PD catheter insertion in 12 patients who had previous abdominal surgeries.

In our series, three patients had undergone laparoscopic cholecystectomy, one patient had a past intra-abdominal abscess in the right lower quadrant of the abdomen for which laparotomy and surgical drainage had been performed, one patient had undergone appendicectomy, one had undergone a lower segment Cesarean section, two had undergone right iliac fossa renal transplantation, with failed grafts, and four patients had undergone tubectomy surgeries, including two who also had previous cholecystectomy surgeries. In each of these patients, an abdominal examination revealed only scars of the previous surgeries and there was no abnormality on ultrasonography, except increased echogenicity of the kidneys. One patient had a right femoro-femoral arteriovenous graft constructed due to thrombosis in all vessels. There was a very large perigraft collection, which occupied the entire right iliac fossa. In this patient, a left PD catheter was inserted percutaneously, as the graft could not be used.

Preoperatively intravenous vancomycin and intramuscular pentazocin were given. The skin was infiltrated with 2% lignocaine 2 cm below the umbilicus and a midline incision, about 1 cm long, was made in each of these patients. Subcutaneous tissue dissection was performed till the level of the linea alba. After the peritoneal cavity was filled with two liters of saline, the Seldinger technique was used to insert a swan-neck, double-cuffed Tenckhoff catheter directed toward the pelvis. Two more liters of heparinized PD fluid was instilled and drained after which the distal end of the catheter was exteriorized via a subcutaneous tunnel. PD fluid flushing and small volume exchanges were initiated the day after surgery with no break-in period.[3] The volumes were gradually increased to regular two-liter exchanges. No obstruction to the flow of fluid or inability to tolerate larger volumes or peri-catheter leaks were observed. We had previously reported our first case of a 49-year-old lady, with past laparoscopic cholecystectomy and tubectomy, in whom successful percutaneous catheter insertion was done.[4] Subsequently the other patients described earlier in the article were also initiated with success.

These cases illustrate that in those patients who have had uneventful elective 'clean' abdominal surgeries, with minimal or no peritoneal excursion, the future risk of peritoneal adhesion formation is reduced. In this select group of patients, percutaneous PD catheter insertion can still be attempted, if successful, percutaneous PD catheter placement decreases the period of hospitalization and the costs of the procedure.[5] In case of the obstruction to fluid inflow or drain, or intolerance to larger volumes of fluid, laparotomy with adhesiolysis and catheter placement under vision will become mandatory. If there is any ambiguity regarding the presence of intra-peritoneal adhesions on clinical examination or ultrasonography, we would suggest proceeding with laparoscopy or laparotomy for catheter insertion.

Insertion of PD catheters percutaneously is therefore not absolutely contraindicated in patients with a history of past abdominal surgeries if the likelihood of peritoneal adhesions is extremely low and can be attempted as the preferred procedure.

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