Periton Diyalizinin Nadir Bir Komplikasyonu: Mesane Delinmesi

An Unusual Complication of Peritoneal Dialysis: Bladder Perforation

Hasan Altun[1], Oktay Banlı[1], Ayşegül Öztemel[2], Osman Gül[3]
[1]Ankara Etlik İhtisas Hastanesi, Genel Cerrahi Bölümü, Ankara
[2]Ankara Etlik İhtisas Hastanesi, Nefroloji Bölümü, Ankara
[3]Ankara Etlik İhtisas Hastanesi, Üroloji Bölümü, Ankara

ÖZET

Sürekli ayaktan peritoneal diyaliz, son evre böbrek yetmezliklerinde kullanılan tedavi yöntemlerinden biridir. Peritoneal dializ kateterinin yerleştirilmesi esnasında önemli komplikasyonlar meydana gelebilir ve ciddi morbidite yaratabilir. Biz bu yazımızda böbrek yetmezliği olan bir hastaya kateter takılması esnasında meydana gelen mesane delinmesi ve kateterin mesaneye yerleştirilmesini anlatıyoruz. Geçirilmiş peritonit, geçirilmiş karın ameliyatı ve nörojenik mesane bu riski artırmaktadır. Bu risklere sahip olan hastalarda açık cerrahi yöntemlerin kullanılması daha uygun olabilir.

Anahtar sözcükler: periton diyalizi, mesane delinmesi, böbrek yetmezliği

ABSTRACT

Continuous ambulatory peritoneal dialysis is a usual method for the therapy of patients with end-stage renal failure. Some complications may occur during catheter insertion and cause significant morbidity. We report an inadvertent placement of a Tenckhoff catheter into bladder in a patient with end-stage renal disease. It has been known that history of peritonitis, previous abdominal surgery and neurogenic uropathy increase the likelihood of bladder perforation. Open surgical methods may be more appropriate for patients that have risk factors mentioned above.

Keywords: peritoneal dialysis, bladder perforation, renal failure

2006;15 (1) 63-64

Introduction

Continuous ambulatory peritoneal dialysis (CAPD) is a method of therapy for patients with end-stage renal disease. A lot of techniques exist for the insertion of CAPD catheters. Catheter related complications causing significant morbidity limit its usefullness. Although open surgical methods were most commonly used before, percutaneous and laparoscopic techniques are going to be more popular. Percutaneous procedures have the advantages of having a lower cost and requiring a shorter time of hospitalisation (1). Blind techniques have the disadvantage of not seeing the peritoneal cavity. Complications occur mostly during catheter insertion. Bladder perforation during the peritoneal dialysis catheter insertion is a rare event.

Yazışma Adresi: Op.Dr. Hasan Altun
Çukurambar Mah. 41. Cadde No: 14/15 Balgat, Çankaya, Ankara
Tel: 0 533 652 05 68
E-mail: haltun@hotmail.com.tr

Case Report

A 30-year-old woman with end-stage renal disease secondary to *diabetes mellitus*, was admitted to the Nephrology Department in our hospital for CAPD. The patient had a previous CAPD catheter insertion which was removed because of repeating peritonitis. She had been placed on maintenance hemodialysis meanwhile. Because of the patient's incompliance wih hemodialysis, it was decided to insert a Tenckhoff catheter and switch the modality to peritoneal dialysis. Patient was fasted and encouraged to empty the bladder. Bowel preparation was made before the procedure. Prophylactic antibiotic therapy was administered. Tenckhoff catheter was inserted by blind Seldinger method via subumblical incision un-

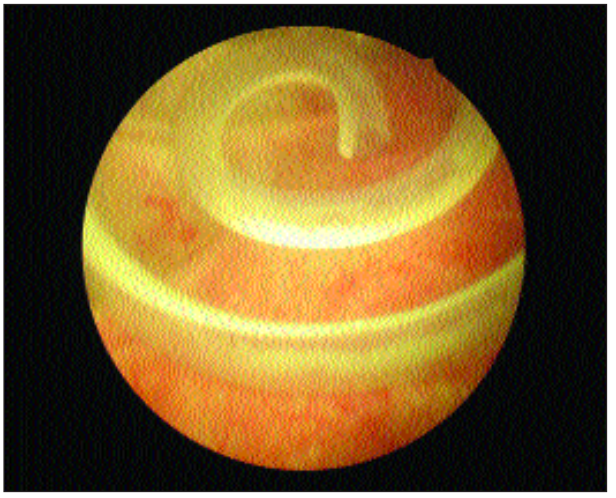

Figure 1. Pigtail part of Tenckhoff catheter seen in the bladder.

der local anesthesia. Abdominal radiograph showed pelvic placement of the catheter in the midline. After 5 days of irrigation, peritoneal dialysis (PD) was started on the 21st day of catheter insertion. PD solution was spilled through perineum. A cystogram revealed no intraperitoneal leakage from the bladder. First, uterus perforation was thought. For determination of leakage site Tc-99m MAA scintigraphy was performed and it revealed accumulation in pelvis. After bladder catheterization, it was seen that PD solution was coming through urinary catheter. On cystoscopy, pigtail part of Tenckhoff catheter was seen in the bladder (Figure 1). One week after the removal of CAPD catheter, urinary catheter was also removed.

Discussion

A few cases that have bladder perforation have been reported in the literature (2-11). Risk factors for perforation are previous abdominal surgery, past history of peritonitis and neurogenic uropathy. In patients previously submitted to abdominal surgery, intra-abdominal adhesions increase the risk of viscus perforations because of adhesions that hold the bladder and bowels in a fixed position. Infusing of dialysis solution into peritoneal cavity before the procedure reduces the incidence of this complication (12).

Neurogenic uropathy may be seen frequently in long-standing diabetic patients. A distended atonic bladder with no sensation, urinary urgency and incomplete emptying is seen in these patients. Risk of inadvertent puncture of the bladder increases in these patients. Bladder catheterization may be useful for patients with suspected atonic bladder to decrease the likelihood of inadvertent bladder perforation.

Risk factor for this patient was past history of peritonitis that give rise to intraabdominal adhesion and hypotonic bladder. For patients that have risk factors mentioned above, open surgical methods may be more appropriate.

References

1. Banli O, Altun H, Oztemel A. Early starting of CAPD with Seldinger technique. Perit Dial Int 2005;25:556-559.
2. Francis DM, Donnelly PK, Veitch PS, et al. Surgical aspects of continuous ambulatory peritoneal dialysis-3 years experience. Br J Surg 1984;71:225-229.
3. Cronen PW, Moss JP, Simpson T, Rao M, Cowles L. Tenckhoff catheter placement: surgical aspects. Am Surg 1985;51: 627-629.
4. Stone MM, Fonkalsrud EW, Salusky IB, Takiff H, Hall T, Fine RN. Surgical management of peritoneal dialysis catheters in children: five-year experience with 1,800 patient-month follow-up. J Ped Surg 1986;21:1177-1181.
5. Sanderson MC, Swartzendruber DJ, Fenoglio ME, Moore JT, Haun WE. Surgical complications of continuous ambulatory peritoneal dialysis. Am J Surg 1990;160:561-565.
6. Allon M, Soucie JM, Macon EJ. Complications with permanent peritoneal dialysis catheters: experience with 154 percutaneously placed catheters. Nephron 1988;48: 8-11.
7. Bamberger MH, Sullivan B, Padberg FT Jr, Yudd M. Iatrogenic placement of a Tenckhoff catheter in the bladder of a diabetic patient after penectomy. J Urol 1993;150:1238-1240.
8. Rall KL, Beagle GL. Inadvertent puncture of the urinary bladder by a peritoneal dialysis catheter. South Med J 1993;86: 1398-1399.
9. Nielsen PK, Hemmingsen C, Ladefoged J, Olgaard K. A consecutive study of 646 peritoneal dialysis catheters. Perit Dial Int 1994;14:170-172.
10. Rouse J, Walker R, Packer S. Inadvertent intravesical insertion of a Tenckhoff catheter. Perit Dial Int 1996;16:186-187.
11. Moreiras M, Cuina L, Rguez Goyanes G, Sobrado JA, Gil P. Inadvertent placement of a Tenckhoff catheter into urinary bladder. Nephrol Dial Transplant 1997;12:818-820.
12. Bullmaster JR, Miller SF, Finley RK Jr, Jones LM. Surgical aspects of the Tenckhoff peritoneal dialysis catheter. A 7 year experience. Am J Surg 1985;149:339-342.