Pneumoperitoneu em doente sob diálise peritoneal

Pneumoperitoneum in peritoneal dialysis patients

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RESUMO

O Pneumoperitoneu no doente em diálise peritoneal é uma complicação rara, no entanto deve ser tida em atenção de forma a evitar uma laparotomia desnecessária que possa comprometer esta opção dialítica. Os autores qpresentam o cado de uma doente de 70 anos de idade com insuficiência renal crónica, em diálise peritoneal há 21 meses, sem qualquer complicação ou sinal de peritonite. Admitida no serviço de urgência com dor epigástrica súbita. À observação, um abdómen timpanizado, sem alterações na porção externa do cateter de Tenckhoff. Analiticamente sem leucocitose. O Rx Abdominal demonstrou a existência de pneumoperitoneu A TC abdominal confirmou uma pneumoperitoneu generalizado mas predominante no andar supramesocólico, sem extravasamento de contraste oral e com o cateter de diálise bem posicionado no quadrante inferior esquerdo. Procedeu-se á aspiração do pneumoperitoneu através de um técnica asséptica em posição de Trendlenburg, com confirmação radiológica da resolução do mesmo. Constatou-se recorrência do penumoperitoneu no dia seguinte, apesar da doente permanecer assintomática, pelo que se procedeu à remoção do cateter, sem recorrência do pneumoperitoneu.

Palavras chave: *Pneumoperitoneu; Diálise Peritoneal; Insuficiência renal crónica.*

ABSTRACT

Pneumoperitoneum (PP) in peritoneal dialysis (PD) patients is a rare complication; however it should be considered to avoid an unnecessary laparotomy and that will also compromise the dialytic options. A 70 year-old woman with end-stage renal disease had been on chronic PD with automated night therapy for 21 months, without complications or any signs of peritonitis. She was admitted with a sudden epigastric pain. Tympanic abdomen was present on physical examination. The Tenckhoff catheter exit site looked unremarkable. Laboratory testing showed a normal white cell count. An important PP was visible in chest and abdominal X-rays. Contrast-enhanced abdominal CT scan confirmed a generalised PP distributed in supramesocolic recesses. No extravasation of endoluminal contrast was seen. Dialysis catheter was placed at left lower quadrant. We performed the aspiration of PP using an aseptic technique in Trendelenburg position. Abdominal X-ray showed resolution of PP. In the following day she was asymptomatic but abdominal X-ray revealed a newly developed PP, thus we decided to remove the catheter with no recurrence of PP.

Key words: *Pneumoperitoneum; Peritoneal dialysis; End-stage renal disease.*

BACKGROUND

Peritoneal dialysis (PD) remains a worthwhile treatment approach for patients with end-stage renal disease. Although peritoneal dialysis catheter plays a major role to assure PD, it also facilitates the entry of microorganisms and air into the peritoneal cavity. Pneumoperitoneum (PP) is a rare complication of PD and it can be caused by bowel perforation or due to a faulty technique during catheter manipulation [1]. Incidence and clinical significance of PP in PD patients have been widely debated in the literature. Its incidence varies from 4 to 34% as reported in previous studies [2-5]. Visceral perforation has been documented in a small percentage (5.9 to 14.3%) of the peritoneal dialysis patients with known PP [6]. The surgical causes of PP are an important and potentially life-threatening differential diagnosis. Surgical exploration to diagnose and treat the cause is a common approach, but in patients with end-stage chronic kidney disease the multiple comorbidities usually present poses significant risks. Surgical procedures in these patients carry also a risk of losing PD catheter and consequently, the choice of dialysis modality [1].

CASE REPORT

A 70 year-old woman with end-stage renal disease had been on chronic PD with automated night therapy for 21 months. Dialysis modality was chosen for personal and social reasons. During this period she had no complications or any signs of peritonitis.

She was admitted to the emergency room with a sudden epigastric pain with associated cough. Anamnesis revealed a gastro-oesophageal reflux disease treated with proton pump inhibitor. Painful and tympanic abdomen was present on physical examination. The Tenckhoff catheter exit site looked unremarkable. Laboratory testing showed a normal white cell count and a negative fluid culture. An important PP was visible in chest and abdominal X-rays (Figure 1). Contrast-enhanced abdominal CT scan confirmed a generalised PP distributed in supramesocolic recesses (Figure 2). No extravasation of endoluminal contrast was seen. Dialysis catheter was placed at left lower quadrant.

She was quite symptomatic due to the presence of significant free air in peritoneal cavity. We assumed a DP technic related pneumoperitoneum. So we performed the aspiration of PP, through Tenckhoff

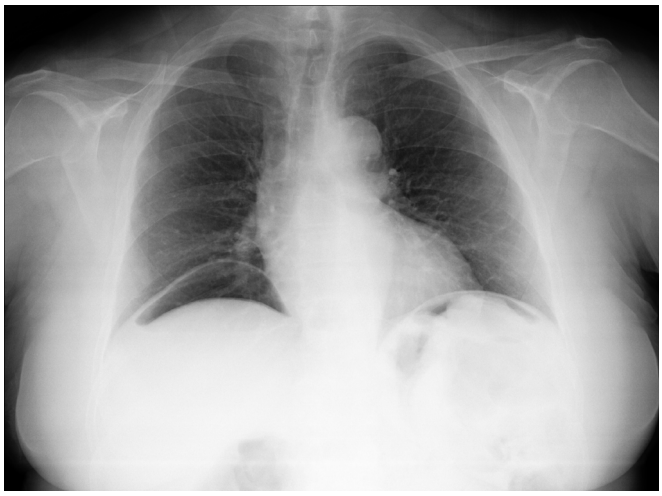

Figure 1 – Right pneumoperitoneum in thoracoabdominal X-ray.

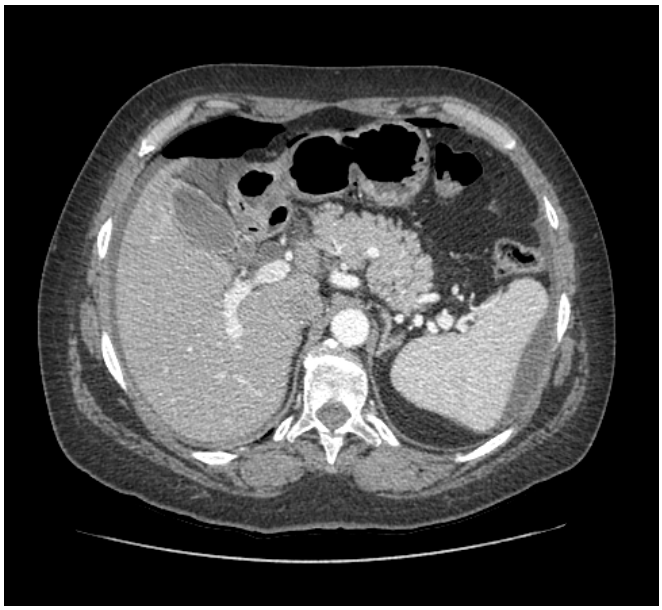

Figure 2 – Generalised pneumoperioenum in contrast-enhanced abdominal CT.

catheter, using an aseptic technique with patient in Trendelenburg position and after infusion of 1L dialysate. Their symptoms improved and abdominal X-ray showed resolution of PP (Figure 3).

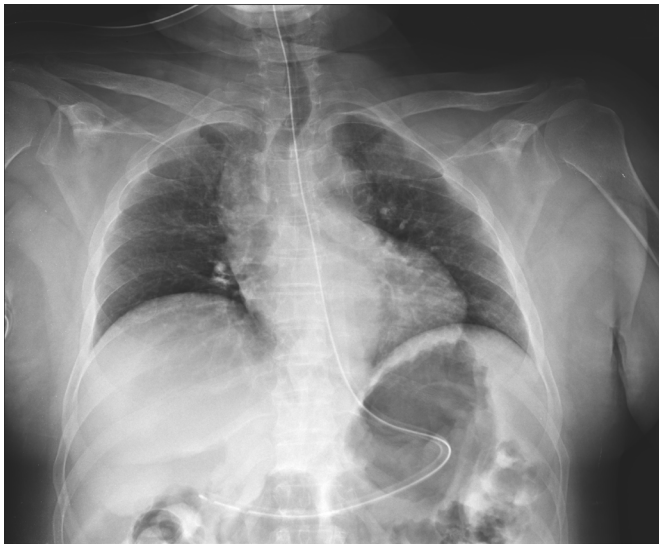

Figure 3 – Thoracoabdominal X-ray with no pneumoperitoneum.

In the following day she was asymptomatic but abdominal X-ray revealed a newly developed PP, thus Nephrology department decided to remove the catheter and start hemodialysis. The patient remained asymptomatic and therefore no recurrence of PP.

CONCLUSION

Careful clinical evaluation and appropriate investigations are needed to exclude surgical causes of acute abdomen. Pnemoperitoneum in peritoneal dialysis patients is a rare complication; however it should be considered in differential diagnosis to avoid an unnecessary laparotomy that will compromise the dialytic options.

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