

中文題目：以腹膜透析導管 錯位為纏繞性腹膜硬化症之最初影像學表現

英文題目：**Malposition of Peritoneal Dialysis Catheter as the Initial Imaging Presentation of Encapsulating Peritoneal Sclerosis**

作者：柯智傑<sup>1</sup>，李宗倫<sup>1,2</sup>，蔡亨政<sup>1,2</sup>，林志慶<sup>1,2</sup>

服務單位：台北榮民總醫院 內科部<sup>1</sup>，腎臟科<sup>2</sup>

## **Introduction**

Encapsulating peritoneal sclerosis (EPS) is a catastrophic complication and rare cause of intestinal obstruction characterized by fibrotic encapsulation of the bowel due to a progressive intraabdominal inflammatory process. The presenting symptoms and signs of EPS are often vague and non-localizing. Therefore, accurate diagnosis cannot be made during the early stages of EPS. Abdominal imaging was initially undertaken to correct catheter malposition and instead revealed peritoneal thickening and mesenteric calcification, which led to the confirmed EPS diagnosis. This is the first imaging report to demonstrate peritoneal dialysis catheter malposition in plain abdominal film as the initial imaging presentation of EPS.

## **Case Presentation**

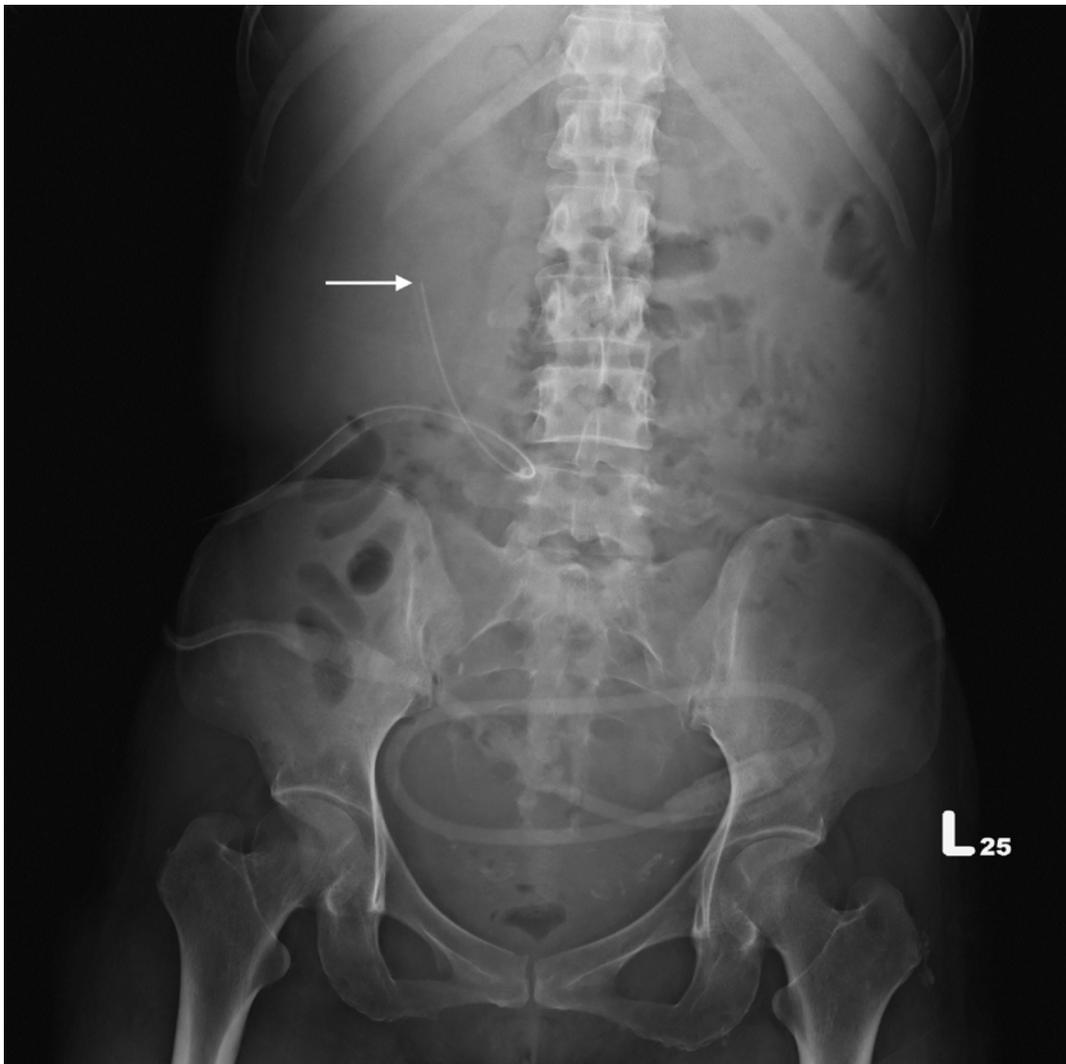
A 52-year-old woman with end-stage renal disease on peritoneal dialysis (PD) for 10 years presented to emergency department following one month of general weakness with frequent falling down episodes. She also suffered from anorexia, nausea, vomiting and abdominal fullness in the previous one month. Physical examinations revealed muscle wasting and weakness of lower extremities but without neurological deficits. Body weight gain of 3 kilograms was noted under her previously prescribed dialysate regimen during the first 2 days of hospitalization while there was no evidence of peritonitis. Plain abdominal film disclosed malposition of PD catheter with tip at right upper quadrant (RUQ) of abdomen (Figure 1). However, the migration of PD catheter could not be corrected back to normal position after the use of laxatives. Furthermore, the non-contrast enhanced computed tomography (CT) revealed peritoneal thickening and mesenteric calcification (Figure 2). Remarkably, the diagnostic laparoscopy disclosed the enwrapping of PD catheter by the small bowel loop with entrapment of the catheter tip into the calcified and fibrous intestinal mesentery, supporting the diagnosis of encapsulating peritoneal sclerosis. Finally, reposition of PD catheter back to Douglas' pouch was performed smoothly by laparoscopic procedure.

## **Discussion**

Encapsulating peritoneal sclerosis (EPS) is an infrequent but devastating complication in long-term PD patients with reported mortality rate around 50% within 12 months after diagnosis.

Clinical manifestations of EPS include anorexia, nausea, vomiting, gastrointestinal obstruction, hemoperitoneum and sterile non-resolving or recurrent PD peritonitis. Among different radiological modalities, CT scanning carries the greatest value in the diagnosis of EPS by the presentations of peritoneal calcification, bowel thickening, bowel tethering, and bowel dilatation. This is the first report to demonstrate the malposition of PD catheter in plain abdominal film as the initial imaging presentation of EPS. Hopefully, it may remind the clinicians of this possible imaging-clinical correlation in long-term PD patients to make correct diagnosis and begin treatment as early as possible, especially in those with severe gastrointestinal manifestations and malnutrition.

**Figure 1.** Plain abdominal film showed malposition of PD catheter with tip at right upper quadrant (RUQ) of abdomen (arrow)



**Figure 2.** Non-contrast enhanced computed tomography (CT) showed peritoneal thickening (arrow) and mesenteric calcification (arrowhead).

