Delayed Decubitus Perforation of the Bowel Is a Sword of Damocles in Patients on Peritoneal Dialysis

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Dear Sir,

Recently, Thibodeaux [1] reported a case of delayed bowel perforation associated with the use of continuous ambulatory peritoneal dialysis (CAPD) catheter. The author believed that his was the first report of a delayed perforation of the colon resulting from an indwelling peritoneal dialysis (PD) catheter.

However, delayed decubitus perforation of the bowel is a rare but a well-recognized complication during long-term PD and is associated with a 29% mortality and significant morbidity, especially in elderly patients (table 1).

The pathogenesis of late perforation of the bowel involves intimate contact between the peritoneal catheter and the intestinal wall. The continuous pressure causes localized ischemia, eventually leading to the formation of decubitus erosion, laceration or frank perforation [11]. Sometimes it may be difficult to determine whether the peritonitis is related to PD (usually a single organism) or represents an acute surgical problem due to bowel perforation when a mixed flora and/or anaerobes is common.

Unfortunately, and despite the three reviews published in 1992 [10-12], this serious complication of long-term PD has been mentioned briefly only in the recent excellent 'The Textbook of Peritoneal Dialysis' [14].

Thus, we believe that it is very important to include this entity: 'a delayed bowel perforation during long-term peritoneal dialysis' into the differential diagnosis of PD-related acute peritonitis.

Table 1. Patients on PD with bowel perforation

IPD = Intermittent peritoneal dialysis; CAPD = continuous ambulatory peritoneal dialysis; NA = not available; CGN = chronic glomerulonephritis; CIN = chronic interstitial nephritis; PKD = polycystic kidney disease; HTN = hypertension; DM = diabetes mellitus; AM = amyloidosis.

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Reply

Dear Sir,

Kagan et al. [1] recently emphasized that delayed perforation of the bowel during long-term peritoneal dialysis (PD) is a rare but well-documented entity which is associated with significant morbidity and mortality. They described the pathophysiology of the erosion and attributed it to chronic localized ischemia of the bowel wall resulting from the intimate contact of the PD catheter tip with the bowel wall. This event ultimately leads to perforation and peritonitis.

Although this complication is well described in patients undergoing chronic PD, our case is unique in that the bowel perforation occurred acutely after the patient developed an adynamic ileus from simple catheter-related peritonitis. The acute distention of the bowel, in my view, caused the catheter to erode into the bowel wall, causing peritonitis.

I believe it is important to maintain a high index of suspicion of bowel perforation in patients undergoing PD who deteriorate after developing conditions that cause the bowel to become acutely distended [2].

I appreciate the constructive comments Kagan et al. have contributed to this interesting topic.

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