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*Letter to the Editor*

# Bacterial peritonitis following multiple endoscopic polypectomy in a peritoneal dialysis patient despite antibiotic prophylaxis

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**TO THE EDITOR:** Sir, it has been recommended that patients on continuous ambulatory peritoneal dialysis (CAPD) undergoing endoscopy with or without polypectomy need antibiotic prophylaxis in order to avoid a bacterial peritonitis episode. Such episodes affect peritoneum and decrease its ability for proper dialysis. In fact, guidelines for peritonitis recommend antibiotic prophylaxis for patients undergoing colonoscopy with polypectomy while on CAPD but there is little literature to support this recommendation.

A 48-year old patient on continuous ambulatory peritoneal dialysis and in good performance status underwent scheduled ensocopic polypectomy of seven polyps varying from 0.5 to 1.5cm in size. Ampicillin 2gr IV 60 min and gentamycin 1.5mg/Kg IV were administered before procedure and after procedure amoxycillin 1.5gr PO 6h and 12 h later was administered. Endoscopic procedure was well tolerated, bowel preparation was adequate, and polypectomy was uneventful. The patient went home in excellent condition and continued scheduled CAPD program. However, 24 hours after the endoscopic procedure the patient came to the emergency depatment because of diffuse abdominal discomfort and nausea. Clinical examination was unremarkable and he had no fever.

**Key words:** Peritonitis, colonoscopy, endoscopy, polypectomy, peritoneal dialysis, antibiotic prophylaxis

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Peripheral blood tests revealed leucocytosis at 12,300/mm$^3$ but CRP was negative. Abdominal computed tomography was unremarkable and there were no signs of bowel perforation. Analysis of the peritoneal dialysis fluids was compatible with bacterial peritonitis and the patient was admitted and started on intraperitoneal antibiotic treatment.

The peritonitis episode responded very well to intraperitoneal antibiotic treatment. As the patient had no urine production, induction (at first peritoneal fluid exchange, volume 2L) antibiotic treatment included cefazolin 500 mg/L and amikasin 25 mg/L. Maintenance antibiotic treatment (subsequent peritoneal fluid exchanges, volume 2L each) lasted two weeks and included cefazolin 125mg/L and amikasin 12mg/L. No intravenous antibiotics were given.

Despite many cultures we were not able to identify any special microbe in the serum or the ascitic fluid. On the third day of hospitalisation peritoneal dialysis fluids were normal and the patient was discharged in excellent condition.

Peritonitis following endoscopic polypectomy in a CAPD patient has been previously reported and the outcome was also favourable.[1] An additional case of bacterial peritonitis following a colonoscopic polypectomy despite antibiotic prophylaxis with vancomycin and gentamycin prior to the procedure has been also reported.[2]

According to a retrospective study with 77 CAPD patients undergoing 97 colonoscopies the risk of peritonitis after colonoscopy without antibiotic prophylaxis was 6.3%.[3] No peritonitis developed in the 18 cases where antibiotics were given before colonoscopy while colonic biopsy or polypectomy did not appear to increase the risk of peritonitis. In the 18 patients who did not develop peritonitis, antibiotics were given in 3 cases for peritonitis pro-

phylaxis (levofloxacin 300mg p.o), in 4 cases for endocarditis prophylaxis (vancomycin 1gr IV+ gentamycin 50mg IV) and in the remaining 11 cases various antibiotics (cefuroxime, ceftriaxone, metronidazole, ampicillin) for the treatment of exit-site, urinary tract or respiratory tract infections. In total five patients developed peritonitis after colonoscopy. Four of the five episodes of peritonitis occurred within 24 hours after colonoscopy and one episode occurred five days later. Three patients had culture-negative peritonitis, one patient had coagulase-negative staphylococcus peritonitis and one patient developed Escherichia coli peritonitis after colonoscopy.

In contrast to the case reported herein, in this 77-patient series none of the five patients who developed peritonitis received antibiotics before the procedure. As in our study, all patients responded well to intraperitoneal antibiotics without the need to remove the dialysis catheter.

Those cases, including this reported herein, support the need for broad-spectrum antibiotic prophylaxis prior to colonoscopic procedures, especially if polypectomy is planned in CAPD patients. The antibiotic chosen should cover anaerobes as well as gram-positive and gram-negative enteric organisms.

The International Society for Peritoneal Dialysis (ISPD) 2005 guidelines for peritonitis recommended antibiotic prophylaxis for CAPD patients undergoing colonoscopy with polypectomy with the use of ampicillin 1g plus a single dose of an aminoglycoside with or without metronidazole, given intravenously just prior to examination.[4] In general, antibiotic prophylaxis together with other preventive measures such as draining of peritoneal dialysis effluent before the procedure should be considered in CAPD patients undergoing colonoscopy, with or without biopsy or polypectomy.[3]

The efficacy of such prophylactic antibiotics would be better defined by large randomised trials. Along these lines, we would like to suggest that guidelines for this group of CAPD patients should be strictly followed and probably intensified accordingly in patients undergoing procedures with high risk.

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