

Colonic Ulcerations in a Patient on Hemodialysis

Sir,

Platelet dysfunction, the use of heparin and antiplatelets increase the risk of gastrointestinal (GI) bleeding in chronic kidney disease (CKD) patients on dialysis.^[1] We report an unusual cause of GI bleeding in a patient on hemodialysis.

A 66-year-old female, a known case of type 2 diabetes mellitus, hypertension, ischemic heart disease, and CKD presented to us with a history of fall 2 weeks back. During this fall, she sustained an injury to her back and left hand. Her evaluation revealed a normotensive afebrile woman with pedal edema and swelling in the left forearm. Her initial investigations [Table 1] revealed the presence of severe renal failure, mild hypocalcemia, severe hyperphosphatemia, normal Vitamin D, and elevated serum parathormone levels. Her radiological investigations revealed a fracture of the left distal radius and 12th thoracic vertebral fracture for which she underwent surgery. She was initiated on hemodialysis through a right internal jugular catheter, and for her hyperphosphatemia, she was started on sevelamer carbonate 800 mg three times a day with food.

On the 5th postoperative day, she had melena with a significant drop in hemoglobin (12.0 g/dl to 8.6 g/dl). There was no history of abdominal pain vomiting or constipation. Her bleeding parameters were normal. An upper GI endoscopy showed mild gastric erosions. Her aspirin and clopidogrel were stopped. Next day, she had large quantity of maroon colored rectal bleed with further drop in hemoglobin (6.5 g/dl). A colonoscopy this time showed an ileocecal valve ulcer with active ooze. There were multiple erosions all over the colon. Colonic biopsies were taken and the active ulcer was photocoagulated. She received blood transfusions during dialysis. Her GI bleeding settled subsequently. At discharge, her hemoglobin was 9.8 g/dl.

Her colonic biopsy report came as extensive mucosal ulceration with areas of the organization and crystalloid structures [Figure 1]. These rusty yellow colored crystals had slightly curved fish scale structure suggestive of sevelamer crystals. Her clinical and laboratory investigations for common causes of GI bleeding (infective, inflammatory, and neoplastic) were noncontributory. It was felt that sevelamer carbonate was responsible for the GI bleeding aggravated by the concomitant use of antiplatelet medications. Sevelamer carbonate was withdrawn, and calcium acetate was started. At discharge she is stable, and there was no recurrence of bleeding even after the reinstitution of aspirin and clopidogrel.

Recently, the use sevelamer carbonate is implicated in various gastrointestinal symptoms in CKD patients.^[2]

Table 1: Initial laboratory investigations

Investigation	Result	Range
Hemoglobin	12	13-17 (g%)
Total leukocyte count	14710	4000-11,000 (cells/cumm)
Platelet count	2.04	1.5-4.1 (lakhs/cumm)
ESR	76	0-15 (mm)
PT	14.6	11-16 (s)
INR	1.12	
APTT (patient/control)	26.1/29.30	26-40 (s)
RBS	84	<200 (mg/dl)
Serum creatinine	8.8	0.52-1.04 (mg/dl)
Blood urea	262	15-36 (mg/dl)
Serum potassium	6.4	3.5-5.1 (mmol/L)
Serum sodium	134	137-145 (mmol/L)
Serum calcium	7.9	8.4-10.2 (mg/dl)
Serum phosphorus	11	2.5-4.5 (mg/dl)
Serum uric acid	7.7	2.5-6.2 (mg/dl)
Serum parathyroid hormone	281	14-65 (pg/ml)
Serum Vitamin D 3 levels	40.60	6-20 (ng/ml)
Bilirubin		
Total	0.87	0.2-1.3 (mg/dl)
Conjugated	0.3	0-0.3
Alkaline phosphatase	178	38-126 (IU/L)
AST	13	9-52 (IU/L)
ALT	17	14-36 (IU/L)
Total protein	7.6	6.3-8.5 (g/dl)
Albumin	3.4	3.5-5.1
Globulin	4.1	2.3-3.5
Complete urine examination		
PH	6.5	4.7-5.5
Albumin	Present (++)	Nil
Sugars	Nil	Nil
Pus cells	Loaded	0-5/hpf
RBCs	2-4	0-2/hpf

ESR: Erythrocyte sedimentation rate, PT: Prothrombin time, INR: International normalized ratio, APTT: Activated partial thromboplastin time, RBS: Random blood sugar, AST: Aspartate aminotransferase, ALT: Alanine aminotransferase, RBCs: Red blood cells

GI bleeding secondary to the tablet has been reported in association with stercoral ulcerations^[3] and in patients without constipation also.^[4,5]

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Conflicts of interest

There are no conflicts of interest.

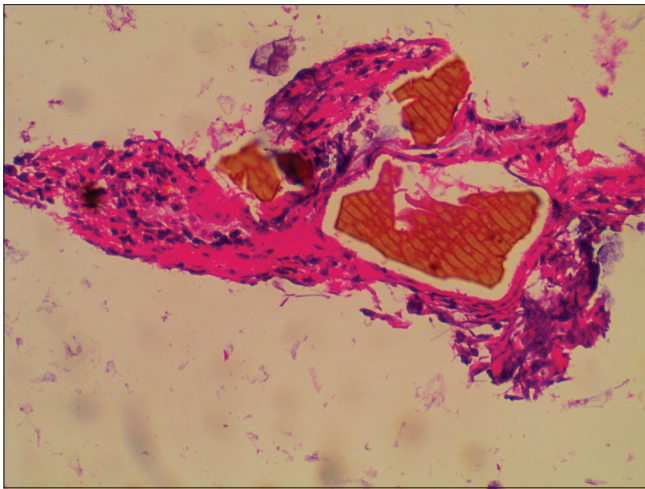


Figure 1: Sevelamer crystals embedded in the colonic mucosa

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