

Calcium polystyrene sulfonate**S****Colonic mucosal necrosis in a uraemic patient: case report**

A 34-year-old uraemic man developed colonic mucosal necrosis after receiving calcium polystyrene sulfonate [Kalimate] for hyperkalaemia.

The man was hospitalised with intracranial haemorrhage and was found to have uraemia, creatinaemia and hyperkalaemia. He underwent intermittent haemodialysis, and started receiving twice daily oral calcium polystyrene sulfonate 10g. On hospital day 9, he had a potassium level of 8.0 mEq/L, and an ECG revealed ST-segment depressions and poor R wave progression. He received two enemas with calcium polystyrene sulfonate 30g in 200mL of dextrose water, and oral calcium polystyrene sulfonate 15g three times daily was administered for 3 days. Profuse haematochezia developed 2 days later. Diffuse active ulceration with mucosal necrosis and haemorrhage, and multifocal pseudomembrane formations, were evident on sigmoidoscopy; abnormal findings extended from the rectum to beyond the reach of the endoscope. Histology of biopsy samples were consistent with active colitis with mucosal necrosis or ulceration, and showed angulated crystals of irregular shape and size with a characteristic crystalline mosaic pattern on the mucosa, ulcer bed tissue and within the necroinflammatory debris.

Calcium polystyrene sulfonate was discontinued, and the man started receiving conservative therapy. On follow-up sigmoidoscopy 1 week after the initial investigation, multiple scattered ulcers were evident with mild improvement. Biopsies revealed that the ulcers were healing, with persistence of a few remaining crystals. Haematochezia gradually resolved, but he died of cardiovascular disorders on hospital day 45.

Author comment: "We think it is necessary for the clinician to be aware of that the use of Kayexalate (or Kalimate) preparation can be related to gastrointestinal, especially colonic mucosal necrosis in a small subset of patients who have multiple medical problems. Recognition of Kayexalate crystals is important for pathologists in reaching a correct diagnosis."

Joo M, et al. Colonic mucosal necrosis following administration of calcium polystyrene sulfonate (Kalimate) in a uremic patient. *Journal of Korean Medical Science* 24: 1207-11, No. 6, Dec 2009 - South Korea 803007108