

## Intestinal injury due to sodium polystyrene sulfonate (SPS) treatment in a heart transplant patient

Ivor Jelavić<sup>a</sup>, Boško Skorić<sup>ab</sup>

<sup>a</sup>*School of Medicine University of Zagreb*

<sup>b</sup>*Department of Cardiology; University Hospital Center Zagreb*

Ivor Jelavić 0000-0002-6397-4422, Boško Skorić 0000-0001-5979-2346

**INTRODUCTION** Sodium polystyrene sulphonate (SPS) is a cation exchange resin widely used to treat hyperkalemia in patients with renal failure. Although infrequent, one of its most severe side effects is a gastrointestinal mucosal injury that is most commonly located in the colon. The injury can range from mild superficial injury to wall necrosis and perforation. The causative mechanisms are still unclear. The risk factors include end-stage renal disease, hemodynamic instability, solid organ transplantation, postoperative status and gastrointestinal motility disorders, including opioid usage.

**CASE REPORT** One month after a successful heart transplantation the patient presented with sudden hematochezia and hemorrhagic shock. Emergency laparotomy, right hemicolectomy, and end ileostomy were performed. Histopathological analysis of the resected colon revealed mucosal injury with the presence of crystals of Kayexalate in the necrotic regions. We later found out that several days before this event, the patient received SPS for the treatment of hyperkalemia owing to mild deterioration of chronic kidney disease. The patient fully recovered and was discharged from the hospital.

**CONCLUSION** Acute lower gastrointestinal bleeding has many causes, but SPS-related mucosal injury and intestinal perforation is unusual. Since our patient had several predisposing factors for this serious side effect it is important to use SPS only when necessary, especially in the postoperative patients and in those with gastrointestinal motility disorders. Although similar cases of intestinal injury after SPS therapy in solid organ transplant patients have already been reported this is, to our knowledge, the first reported case in a patient who underwent a heart transplantation.