Self-Inflicted Transanal Stripping of Colorectal Mucosa: Report of an Unusual Case*

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A young mentally retarded patient with self-abusive behavior managed to dissect between the mucosa and muscularis layers of the anal canal, through the anus, using his fingers; he managed then to strip the mucosal–submucosal layers of his rectum and colon all the way up to the splenic flexure and presented with an unusual two-yard long “rectal prolapse” which was actually stripped colorectal mucosal–submucosal tube. Diagnosis and management of this unusual patient are discussed. The authors could not find any similar case report in the English Medical literature.

[Key words: Anal canal; Rectum; Colon; Splenic flexure; Prolapse, rectal; Mucosal–submucosal tube]

THE WALL OF the gastrointestinal tract consists of several layers. The potential anatomic dissection plane between the submucosa and the muscularis layers is readily recognizable in surgery during intestinal anastomosis. In 1947, Ravitch and Sabiston reported their technique of stripping the diseased mucosa of the rectum with preservation of the anorectal musculature, placing the ileum inside the retained muscular wall of the rectum and anastomosing it to the anus. This endorectal mucosal stripping pull-through operation with colectomy and ileo-anal anastomosis was originally used for preservation of the anal sphincters in young patients with ulcerative colitis. It was also used successfully in the management of Hirschsprung's disease, Chagas' disease, Crohn's disease, imperforated anus, lymphopathia venereum, colonic polyposis, and adenoma.

The anatomic dissection plane between the submucosa and muscularis layers is less distinct in the anal canal where these layers blend and fuse together, especially in the vicinity of the anal verge. Thus, the access to this dissection plane is more difficult from the anal aspect, and surgeons usually recommend starting the dissection into this plane from the rectal aspect. However, the mentally retarded patient reported on here, in his “saga” of self-mutilation, did manage to dissect between the mucosa and muscular layers from the anal aspect, using his fingernails! He then stripped the mucosa and submucosa not only of his rectum but also of his colon all the way up to the splenic flexure.

Report of a Case

A 31-year-old white man was known to have mental retardation, probably secondary to measles encephalitis in early childhood. He...
was a resident of an institution for the mentally retarded. He was unable to speak and had strong, aggressive, self-abusive behavior which was treated with tranquilizers. He was also known to have anal fissure which has been under treatment for about a year. He was reported to be picking frequently at his anal region. A few days prior to his admission, he was reported to have rectal bleeding with marked increase in the aggressive self-mutilating behavior, requiring treatment with large doses of major tranquilizers and sedatives which, however, was not successful. He managed to beat himself up very badly in the face and extremities; finally, he was transferred to the Medical College of Ohio Hospital for management of "rectal prolapse."

Physical examination showed a well-built young white man with no capacity for verbal communication. Yet he was clearly alert and occasionally responded to verbal command. His face was markedly edematous with swollen eyelids and severe abrasions over both sides of the face; similar skin abrasions were also seen over the left arm and thighs. His chest and abdominal examinations were normal with no tenderness.

Rectal examination showed a long, prolapsed, soft, tubular structure that measured about 100 cm in length and 3 cm in width and had a smooth mucosa-like inner surface and a dull, rough outer surface. The distal-most end of the prolapsed tube looked like a thickened edematous ulcerated anal canal with the columns of Morgagni recognized on its inner aspect (Fig. 1). The anal sphincter mechanism was intact, and the examining finger could be introduced easily between the prolapsed tube and the anus, where some bleeding was noticed. The prolapsed tubular structure had nothing that looked like a taenia coli; it looked like a thin collapsed small-intestinal structure, yet its outer surface was dull and did not resemble serosa.

The prolapsed structure was easily reduced into the rectum, and a sterile saline-soaked perineal dressing was applied. The patient was restrained, but he was very agitated and aggressive and could not be controlled even with large doses of sedatives. He managed to pull the dressing off and pulled out his "rectal prolapse" for a total length of about 180 cm. Emergency laparotomy was recommended.

At laparotomy, there was a large, irregular, seromuscular tear of the left colon; protruding from this avulsed seromuscular coat was an intact mucosal–submucosal "inner-tube" that was freely movable up and down the seromuscular tube and looked very much like the rectally prolapsed tubular structure seen preoperatively (Fig. 2). There was marked edema around the rectum. The distal transverse colon was normal in color and consistency, so a left hemicolectomy was done. The resection extended from the distal transverse colon to the rectosigmoid region. The prolapsed "inner-tube" was pulled out of the rectum from below, and the rectal muscular...