



## CASE REPORT

# Topical granulated sugar for a prolapsed uncomplicated stoma

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## ABSTRACT

Prolapse of stoma is a well-described complication after ileostomy or colostomy and is typically asymptomatic and easily reducible. Manual reduction is generally successful, but it may be unsuccessful in several cases with edematous prolapsed bowel. Unsuccessful reduction in elderly patients and in hemodynamically unstable or patients with co morbidities may advocate the need for emergent laparotomy which carries high risk of morbidity. As such we advocate the use of osmotic agent, specially granulated sugar as an alternative method for conservative management of prolapsed stoma in targeted population.

**Keywords:** Ileostomy; colostomy; complications; laparotomy; osmotic agent; dessicant.

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## INTRODUCTION

A prolapsed stoma is the telescoping out of the inner lining of the bowel from within the stoma. It is one of the most distressing complications of stoma creation. The long-term complication rate with stomas is variable. The incidence of stomal prolapse has been reported in up to 22% in adults and 38% in children.<sup>1,2</sup>

Prolonged exposure of the prolapsed stoma can lead to mucosal ulcerations, bleeding and incarceration. Manual reduction of the stoma must be tried, but due to edema and incarceration on many occasions, it is unsuccessful owing to difficulty in manipulation. An irreducible prolapse might necessitate surgical correction associated with morbidities, especially in the elderly population and people with comorbidities. A successful reduction can eliminate the need for emergency surgery and allow planning for elective surgery

later. Here we suggest a simple method that can be applied to alleviate the need for emergency surgery.

## CASE REPORT

A 55-year-old gentleman presented to emergency with a prolapsed ileostomy. He had undergone ileostomy for multiple perforations following typhoid two weeks back. He underwent resection and anastomosis of the perforated segment followed by a proximal ileostomy (**Fig. 1**).

He is a known case of uncontrolled diabetes mellitus and dyselectrolytemia. Gentle manual reduction of the prolapse was attempted but failed because of gross edema. 500 grams of granulated table sugar was then applied to the stoma for 15 minutes, and the gentle reduction was tried again successfully (**Fig. 2**).

The stoma was successfully reduced; the patient was kept



**Figure 1** Prolapsed ileostomy



**Figure 2** Reduction in prolapsed ileostomy seen following application of sugar

in the hospital to observe any potential complications further. The patient was safely discharged after the management of dyselectrolytemia and diabetes mellitus. At the time of writing, 6 weeks have passed following the successful reduction, and he has not had a recurrence.

## DISCUSSION

Some surgeons have proposed fascial fixation at initial operation, whereas some surgeons prefer to create a minor fascial defect to prevent stoma prolapse.<sup>3</sup> Once stoma prolapse occurs in temporary ileostomies, conservative approach is generally successful. The case can be taken up for elective operation at a later date for re-establishment of intestinal continuity. Surgical options include simple fixation with or without resection of redundant bowel and stoma relocation to treat prolapse of permanent stomas. In our case, we tried to reduce the prolapsed stoma using granulated sugar. There have been reports of the use of icing sugar for the same purpose.<sup>4</sup> Icing sugar has a smaller granule size and has a high surface area to volume ratio. One obvious disadvantage of the method is that it is not readily available, whereas granulated sugar is readily available in cafeterias in hospital and at a low cost. Manual reduction of an incarcerated stoma can be assisted with conscious sedation and desiccants such as witch hazel and sugar. Veterinarians

initially described these techniques in conditions such as bovine uterine prolapse.<sup>5</sup> In the few reports found in the surgical literature, after the failure of manual reduction using continuous pressure, reduction was quickly and easily accomplished using sugar as a mean to reduce tissue edema.<sup>5</sup> Few other case reports are available in pediatric age group on the use of granulated sugar.<sup>6</sup> The technique uses granulated sugar, which is applied generously on top of the prolapsed bowel. The sugar acts as a desiccant and a topical osmotic agent. It draws water out of the swollen bowel and thus enables its easy or spontaneous reduction. The benefits of successful reduction can be significant, especially in poor surgical candidates spared from an emergent laparotomy.

## CONCLUSION

We conclude that even though the procedure is not very technical and skill-oriented, sugar as the osmotic agent in the patient has proved to be effective, since it avoided performing an emergency laparotomy and sedation and anaesthesia. Moreover, the technique is simple and can be undertaken efficiently in rural health care facilities by nurses to reduce the edema before referring the case to tertiary health care. In patients that meet the criteria for conservative management of prolapsed stoma, with the absence of necrosis and unsuccessful attempts of manual reduction, this procedure should be considered an alternative before open surgery.

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