



Sigmoid volvulus: avoiding recurrence

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Dear Sir,

Sigmoid volvulus (SV) is a rare form of intestinal obstruction worldwide. However, it is endemic in Turkey, particularly in Eastern Anatolia [1], which is our practice area. Our clinic has treated 1,018 cases of SV over a 52.5-year period (June 1966 to January 2019). This is the largest single-center SV series in the world [2]. In our series, 25.6% of the patients had a history of recurrence with a mean of 1.4 torsions per case. Of 566 cases decompressed by endoscopy, early recurrence was seen in 4.9%. In 472 patients who were managed surgically the early recurrence rate was 0.6% while late recurrence rate was 5.2%. In 113 patients treated with elective sigmoid colectomy, no recurrence was seen. We wanted to utilize this experience to determine how to minimize recurrence of SV.

SV tends to recur at a rate of 0–55% (mean 25%), principally depending on the applied treatment method. An anatomical predisposition, dolichosigmoid, which is a redundant sigmoid colon with a long and narrow-based mesentery, is the most important factor in the development of both primary and recurrent SV [1, 3]. Therefore, the success of a treatment method is quantified by its effects on dolichosigmoid in SV.

The basic rules of treatment for SV are well-identified in the literature:

1. The initial treatment of SV is endoscopic decompression in uncomplicated and non-gangrenous patients. If endoscopic decompression succeeds, elective sigmoid colectomy is suggested in patients who are not elderly or in poor general condition, while endoscopic decompression alone may be enough or an endoscopic recurrence-reducing procedure such as percutaneous endoscopic

colopexy is added in bed-ridden or elderly patients. If endoscopic decompression fails, emergency surgery is required. Emergency surgery is also needed in complicated or gangrenous cases [1, 3–5].

2. In emergency surgery, sigmoid colectomy is required in gangrenous patients. In non-gangrenous cases, although a surgical volvulus-reducing procedure such as mesopexy or mesoplasty may be used, sigmoid colectomy must be performed in patients who are not elderly or in poor general condition. In bed-ridden or elderly patients without gangrene, surgical decompression alone may be enough [1, 3].
3. Because most patients may fail to return for elective surgery, elective sigmoid colectomy must be performed 2–5 days after endoscopic decompression, preferably in the same hospitalization period. Laparoscopic procedure must be preferred due to its well-known advantages [1, 3].

In addition to these well-described basic rules careful consideration of details of surgical technique is essential. Based on our experience we recommend the following strategies for minimizing recurrence in SV.

1. In percutaneous endoscopic colopexy, two or more fixation tubes must be used instead of a single one to prevent a recurrent rotation around the fixation point.
2. In emergency surgery, unless it is really necessary, mesopexy must be preferred to colopexy. When colopexy is used, multiple fixation sutures must be put instead of a single one to hinder a recurrent turning around the fixation point.
3. In mesopexy, multiple fixation sutures must be placed like horseshoe to immobilize the sigmoid mesentery adequately.
4. In mesoplasty, sigmoid mesentery must be cut longitudinally and sutured transversely to modify the sigmoid mesentery and to distort the dolichosigmoid adequately.
5. In sigmoid colectomy, the length of sigmoid colon resected must be the maximum length allowing a ten-

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sion-free anastomosis without requiring a left colon mobilization.

As a result, even if eliminating all recurrence is difficult or impossible in SV, we think that the recurrence rate may be reduced by following the basic rules and tips mentioned above.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval This article does not contain any studies with human participants performed by any of the authors.

Informed consent For this form of study, formal consent is not required.

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