



EDITORIAL

Self-Expandable Metal Stent as a Bridge to Surgery for Obstructing Colonic Cancer: Still a Hot Topic for Debate



Próteses Metálicas Auto-Expansíveis Como Ponte para a Cirurgia no Carcinoma Colo-Retal em Oclusão: Um Assunto Ainda em Debate

Rosa Coelho, Pedro Moutinho-Ribeiro*

Gastroenterology Department, Centro Hospitalar São João, Porto, Portugal

Colorectal cancer (CRC) is the second most common tumor in women and the third in men and accounts for 10% of all types of tumor worldwide.¹ The incidence of malignant large-bowel obstruction (MLBO) in colonic cancer patients ranges from 8 to 14% and it is usually associated with a poor prognosis.^{2–3}

Over the last decades many retrospective studies, randomized controlled trials (RCTs) and also systematic reviews have been published on the subject of colonic stenting for MLBO.^{4–9} However, the management of this severe clinical condition remains controversial.

Mainly, there are two major indications for colonic stenting in CRC: palliation of advanced disease and preoperative decompression in potentially curable patients. The former is considered an undoubted recommendation with well-established advantages comparing to surgery, such as shorter hospitalization period, lower intensive care unit admission rate and shorter time interval to start chemotherapy.^{7,10,11}

The latter, after the initial enthusiasm related to the advantage of allowing avoidance of a colostomy along primary resection of the tumor, with postpone transit reconstruction (Hartmann procedure), has been questioned because of reported evidence of poorer outcome of these patients. In fact, the European Society of Gastrointestinal Endoscopy (ESGE) guidelines¹² recently published advocate that colonic self-expandable metal stent (SEMS) placement

as a bridge to elective surgery is not recommended as a standard treatment of symptomatic left-sided malignant colonic obstruction (strong recommendation, high quality evidence). They also state that this option should only be considered in patients with potentially curable obstructing left-sided colonic cancer who have an increased risk of postoperative mortality, that is, an American Society of Anesthesiologists (ASA) physical status \geq III and/or age $>$ 70 years.¹²

In fact, the role of stenting for patients who are operative candidates is a subject of continuous debate. Some authors consider that surgical palliation, radiation therapy or even attempted resection may be a better option for those who are relatively healthy with advanced local disease. Importantly, two of the seven RCTs comparing preoperative stenting with emergency resection for left-sided MLBO were prematurely interrupted due to adverse outcomes in the stent group, namely colonic perforation.^{13,14} This unfavorable event is of crucial importance in patients with potentially curable CRC as it may compromise the oncological outcome of those patients with a high recurrence rate. Pirlet et al.¹³ observed 33% of bowel perforations (overt and in the resection specimen) and also highlighted an elevated rate of stent technical failure (53%). The Dutch Stent-In study group also described the high proportion of colonic perforation estimated as 19%.¹⁴

These observations supported the recommendations of the ESGE guidelines mentioned before. Nevertheless, these guidelines have been questioned in a recent publication by Kim *et al.* These authors disagree with the ESGE conservative recommendation regarding SEMS as a bridge to surgery in MLBO scenario.¹⁵ Throughout a brief critical appraisal of the RTCs^{6,8,9} considered by the ESGE recommendations, Kim

DOI of original article: <http://dx.doi.org/10.1016/j.jpge.2016.06.003>

* Corresponding author.

E-mail address: pmoutinhoribeiro@gmail.com
(P. Moutinho-Ribeiro).

<http://dx.doi.org/10.1016/j.jpge.2016.07.001>

2341-4545/© 2016 Sociedade Portuguesa de Gastrenterologia. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

*et al.*¹⁵ highlight that in only one of the RCTs⁸ evaluated it was shown a statistical difference in disease-free survival between preoperative stenting *versus* emergency resection.

Moreover, this idea is supported by a recently published meta-analysis that analyzed 11 studies and depicted that long-term and well-described short-term outcomes suggest that colonic stenting as a bridge to surgery could be a promising alternative strategy for patients with MLBO.¹⁶

Meanwhile, a Danish nationwide cohort study reported a higher 5-year recurrence risk in the SEMS group (39% vs. 30%), but with similar 5-year overall survival rate.¹⁷ Whether the increased recurrence risk of patients with colonic stenting compared to those that performed primary surgery is a result of perforation or other prognostic factors, it is still unknown.

Besides this conservative recommendation made by the ESGE guidelines, the panel of European experts also completely agree that “the results in the literature on the oncological outcomes of the use of SEMS as a bridge to surgery are still inconclusive”.¹⁸ Nevertheless, the guidelines development group considered that, due to the limited and conflicting long-term oncological data, the uncertainty of using SEMS as a bridge to surgery is superior to its benefits. In fact, the meta-analysis of Huang *et al.*¹⁹ confines the advantages of SEMS to only three outcomes: higher primary anastomosis rate, lower stoma rate and fewer postoperative complications.

In this issue, a retrospective study is published by Costa Santos *et al.*²⁰ entitled: “Self-Expandable Metal Stents for Colorectal Cancer – From Guidelines to Clinical Practice”. The authors analyzed the efficacy and safety of stent placement in a total of 36 patients, with 75% of them with colonic stent placement as a bridge to elective surgery. Interestingly, the authors concluded that a significant rate of perforation was observed (22.2%) and most of them diagnosed only during surgery (83.3%). This is also a key message of this article, as the rate of colonic perforations might be underestimated in this population as most of the times they are subclinical and are only identified after histological examination of the surgical specimen.

This retrospective work emphasizes the need for more prospective real life studies in this field in order to establish which of these approaches is “hitting the right note”.

References

1. Ferlay J, Soerjomataram I, Dikshit R, Eser S, Mathers C, Rebelo M, et al. Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. *Int J Cancer*. 2015;136:E359–86.
2. Winner M, Mooney SJ, Hershman DL, Feingold DL, Allendorf JD, Wright JD, et al. Incidence and predictors of bowel obstruction in elderly patients with stage IV colon cancer: a population-based cohort study. *JAMA Surg*. 2013;148:715–22.
3. Moolla Z, Madiba TE. Trends in demographics and management of obstructing colorectal cancer. *World J Surg*. 2014;38:2466–70.
4. Canena JM, Liberato M, Marques I, Rodrigues CI, Lagos AC, Patrocínio SD, et al. Sustained relief of obstructive symptoms for the remaining life of patients following placement of an expandable metal stent for malignant colorectal obstruction. *Rev española enfermedades Dig organo Of la Soc Española Patol Dig*. 2012;104:418–25.
5. Rodrigues-Pinto E, Pereira P, Lopes S, Ribeiro A, Moutinho-Ribeiro P, Peixoto A, et al. Outcome of endoscopic self-expandable metal stents in acute malignant colorectal obstruction at a tertiary center. *Rev española enfermedades Dig organo Of la Soc Española Patol Dig*. 2015;107:534–8.
6. Tung KLM, Cheung HYS, Ng LWC, Chung CCC, Li MKW. Endolaparoscopic approach versus conventional open surgery in the treatment of obstructing left-sided colon cancer: long-term follow-up of a randomized trial. *Asian J Endosc Surg*. 2013;6:78–81.
7. Liang T, Sun Y, Wei Y, Yang D. Palliative treatment of malignant colorectal obstruction caused by advanced malignancy: a self-expanding metallic stent or surgery? A system review and meta-analysis. *Surg Today*. 2014;44:22–33.
8. Sloothaak DAM, van den Berg MW, Dijkgraaf MGW, Fockens P, Tanis PJ, van Hooft JE, et al. Oncological outcome of malignant colonic obstruction in the Dutch Stent-In 2 trial. *Br J Surg*. 2014;101:1751–7.
9. Alcántara M, Serra-Aracil X, Falcó J, Mora L, Bombardó J, Navarro S. Prospective, controlled, randomized study of intraoperative colonic lavage versus stent placement in obstructive left-sided colonic cancer. *World J Surg*. 2011;35:1904–10.
10. Zhao X-D, Cai B-B, Cao R-S, Shi R-H. Palliative treatment for incurable malignant colorectal obstructions: a meta-analysis. *World J Gastroenterol*. 2013;19:5565–74.
11. Karoui M, Charachon A, Delbaldo C, Loriau J, Laurent A, Sobhani I, et al. Stents for palliation of obstructive metastatic colon cancer: impact on management and chemotherapy administration. *Arch Surg*. 2007;142:619–23.
12. van Hooft J, van Halsema E, Vanbiervliet G, Beets-Tan R, DeWitt J, Donnellan F, et al. Self-expandable metal stents for obstructing colonic and extracolonic cancer: European Society of Gastrointestinal Endoscopy (ESGE) Clinical Guideline. *Endoscopy*. 2014;46:990–1053.
13. Pirlet IA, Slim K, Kwiatkowski F, Michot F, Millat BL. Emergency preoperative stenting versus surgery for acute left-sided malignant colonic obstruction: a multicenter randomized controlled trial. *Surg Endosc*. 2011;25:1814–21.
14. van Hooft JE, Bemelman WA, Oldenburg B, Marinelli AW, Lutke Holzik MF, Grubben MJ, et al. Colonic stenting versus emergency surgery for acute left-sided malignant colonic obstruction: a multicentre randomised trial. *Lancet Oncol*. 2011;12:344–52.
15. Kim MK. Is the ESGE guideline recommendation against the placement of stents for left-sided malignant colonic obstruction still open to debate? *Endoscopy*. 2016;48:199.
16. Matsuda A, Miyashita M, Matsumoto S, Matsutani T, Sakurazawa N, Takahashi G, et al. Comparison of long-term outcomes of colonic stent as “bridge to surgery” and emergency surgery for malignant large-bowel obstruction: a meta-analysis. *Ann Surg Oncol*. 2015;22:497–504.
17. Erichsen R, Horváth-Puhó E, Jacobsen JB, Nilsson T, Baron JA, Sørensen HT. Long-term mortality and recurrence after colorectal cancer surgery with preoperative stenting: a Danish nationwide cohort study. *Endoscopy*. 2015;47:517–24.
18. van Halsema EE, van Hooft JE, Hassan C. Reply to Kim. *Endoscopy*. 2016;48:200.
19. Huang X, Lv B, Zhang S, Meng L. Preoperative colonic stents versus emergency surgery for acute left-sided malignant colonic obstruction: a meta-analysis. *J Gastrointest Surg*. 2014;18:584–91.
20. Costa Santos MP, Palmela C, Ferreira R, Barjas E, Alberto Santos A, Maio R, et al. Self-expandable metal stents for colorectal cancer – from guidelines to clinical practice. *Ge – Port J Gastroenterol*. 2016;23:293–9.