

Analysis of risk factors associated with complications of colonic stenting for malignant obstruction

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Abstract

Self expanding metallic stent (SEMS) application can cause serious problems up to one third of the patients and some studies reported negative effect of SEMSs on survival in patients with malignancy. The SEMS type especially the rigid one like Wall-stent rather than more flexible type Ultraflex was also reported to have bad impact on the risk of perforation we believe that stent based management protocol for patients with non-perforating left sided obstructing colorectal cancer is a complex method that needs qualified medical and technical team.

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Key words: Self expanding metallic stent; Colon tumor; Colonic obstruction; Complications; Perforation

Core tip: Self expanding metallic stent (SEMS) application can cause serious problems up to one third of the patients and some studies reported negative effect of SEMSs on survival in patients with malignancy. We believe that stent based management protocol for patients with non-perforating left sided obstructing colorectal cancer is a complex method that needs

qualified medical and technical team.

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TO THE EDITOR

We read with a great interest the article by Almadi *et al*^[1] about the complications and survival in 73 patients undergoing colonic stenting for malignant reasons leading to colorectal luminal obstruction. The authors mainly investigated the predictors for the stent related complications such as perforation, bleeding and obstruction and for the long term survival. They noted that many parameters such as age, sex, length and location of stenosis, neoadjuvant therapy, time between the onset of symptoms and self expanding metal stent (SEMS) insertion, and time between SEMS insertion and surgery had no significant association with the risk of developing complications and long term survival.

Although there is ongoing debate, SEMS placement has been accepted as effective and relatively safe procedure for either palliation or bridge to surgery for the left sided colonic or proximal rectum obstruction due to underlying malignancy^[2]. Nevertheless, SEMS application can cause serious problems up to one third of the patients and some studies reported negative effect of SEMSs on survival in patients with malignancy^[3]. One of the most important life threatening complications of SEMS insertion is perforation. It has been already reported that the classical risk factors for SEMS associated perforation in the colorectum are the existence of acute angular or very curved stenotic segments,

right sided colonic obstruction and use of dual-design stents^[4,5]. The SEMS type especially the rigid one like Wall-stent rather than more flexible type Ultraflex was also reported to have bad impact on the risk of perforation^[6]. In the present study, the authors reported 4.1% rate of perforation associated with the use of Wall-flex type SEMSs and they stated that none of the patient or tumor characteristics were found to be a predictor for complications. However, they did not analyze the role of these risk factors mentioned above. The authors also did not give any data about if co-axial stent application in this study which was reported to be around 12.6% had resulted in any case of perforation. In our daily practice, we principally never put SEMS into curved stenotic colonic segments with acute angles to avoid SEMS induced perforation and always use flexible stents for the same purpose as well. We also avoid using multiple stents and practically do not use the co-axial application of metallic stents since this does not provide greater luminal space at all. Furthermore, like multiple stents, co-axial technique can increase the possibility of pressure injury due to excessive tensile force to the outer corner wall by the long stent ends. Another flaw with this report is that the authors did not seem to analyze the relation with the severity of obstruction (complete or incomplete) and the rate of stent associated complications.

Thus, we believe that stent based management protocol for patients with non-perforating left sided obstructing colorectal cancer is a complex method that needs

qualified medical and technical team. In every case, it is necessary to pay attention to the real risk factors for SEMS associated complications like bowel perforation.

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