



Malignant biliary obstruction due to unresectable pancreatic cancer: Is the irradiation stent the most effective palliation?



Dear Editor,

We really appreciated Wang et al. “Percutaneous stenting and chemotherapy for unresectable pancreatic cancer: Comparison of irradiation stents vs conventional metal stents”, a very interesting paper which was published in *Pancreatology* in September 2019 [1].

The authors introduced a comprehensive retrospective analysis of outcomes in patients affected by obstructive jaundice secondary to unresectable pancreatic cancer (32 patients) and treated with Irradiation Stent (IS) (17 patients) or uncovered Self-expandable Metallic Stent (SEMS) (15 patients). Both groups received combination chemotherapy [1].

Authors underlined how IS led to better results in comparison to uncovered SEMS as concerned median stent patency time (9.8 months for IS vs 8.8 months for SEMS) and median overall survival (10.4 months for IS vs 9.7 months for SEMS) [1]. They assumed that such good results were related to combination of iodine-125 seeds and chemotherapy, showing a synergistic effect on the inhibition of carcinogenic pancreatic cells, mainly due to arrest of the G1 phase and apoptosis induction [1]. Wang et al. concluded that IS prevents tumor ingrowth and proliferation, by extending stent patency time [1]. Moreover, it enhances physical patient status, by delaying cancer progression, thus improving patients' overall survival [1].

Results by Wang et al. seem to be in line with recent publication by Zhou et al. [2]. Authors retrospectively analyzed a 132-patient population affected by malignant biliary obstruction (MBO) [2]. Forty-five patients were treated with IS and 87 ones with uncovered SEMS, leading to favorable IS results in terms of median stent patency time (194 days vs 86 days) and median overall survival (194 days vs 96 days), although study focused on MBOs caused by different tumor etiologies [2].

The two above mentioned studies have confirmed what Zhu et al. had already found [3]. The multicenter open-label randomized phase III trial, which had been designed to compare IS and uncovered SEMS for unresectable MBO, showed how patients treated with IS recorded a significant lower restenosis rate (21% vs 34%), longer stent patency time (212 days vs 104 days in first quartile) and better median overall survival (202 days vs 104 days) [3]. Population analyzed by this study introduced MBOs which were due to different tumor etiologies [3]. Furthermore, in analyzing subgroups of pancreatic cancer and lymph node metastases, overall survival differences between the two groups turned out negligible [3].

Uncovered SEMS is currently the most widely accepted treatment for MBO [3,4]. However, stent restenosis due to tumor growth or normal tissue hyperplasia represents a major drawback [3]. Covered SEMS was used in order to overcome this problem [3].

However, covered SEMS have a higher incidence of migration than uncovered ones and may block ducts, causing cholangitis, pancreatitis, and other complications [3]. Furthermore, covered SEMS prevents just physical tumor growth [3].

The main purpose of a palliation for MBO must be the reduction of symptoms in order to improve the quality of life of the patient in a condition which records a very poor prognosis [4]. Palliation should be achieved through low morbidity procedures. When associated to repeated percutaneous/endoscopic measures, restenosis leads to high discomfort for these patients. Iodine-125 seeds combined with SEMS could not only significantly reduce the rate of restenosis in association with a longer stent patency time, but also increase overall survival, due to radiation on tumor cells [1,3,5].

In conclusion, in the light of excellent preliminary results confirmed by literature, we underline the need to further analyse outcomes of irradiation stents in patients with MBO (possibly randomized, controlled, multicenter trials), by assessing both potential benefits and drawbacks.

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Declaration of competing interest

The authors declare they have no conflict of interest.

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