Peer Review File

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Reviewer A

The authors present a large case series of patients with lung cancer that required esophageal stenting for compression. Approx 1 in 4 required double stenting also of the bronchial tree. The success rate in these challenging patients is impressive. The information provided provides useful information and I recommend publication because the amount of data available in this area is limited.

Comment: The discussion is rather long and, in part, repetitive. If required, it could be shortened. I have no other comments. Except for the following minor issues:
Calvien and Dindo = Clavien and Dindo classification of complications
Figure Legends require translation

Reply:

Thank you for reviewing the paper. Hereby, we present the proper description of the tables and figures that were sent to the editorial office by e-mail.
Table 1. Patients and demographic data.
Table 2. Surgical complications according to the Calvien and Dindo classification
Figure legends

Figure 1: A. Chest radiogram B. CT-scan.Status after right pneumonectomy and esophageal stenting in the course of recurrent lung cancer in the mediastinum (an esophageal prosthesis is marked with an arrow)
Figure 2: CT-scan - recurrence of left lung cancer with constriction on the esophagus and the bronchial tree
Figure 3: Double stenting in the course of esophago-airway fistula (the arrow marks stents)
Figure 4: Overall survival curve for patients with esophageal compression without the obstruction of the bronchial tree (Group I), patients with esophageal compression and bronchial tree obstruction without fistula features (Group II), Patients with dysphagia and esophagotracheal fistula (Group III)

Reviewer B

The authors address an important topic, however, they should be more specific in their manuscript.

Thank you for reviewing the paper:

I. For esophageal stenting:

i. i. What qualified as narrow stenosis for which dilatation was first performed using Savary-Gillard dilators?

ii. ii. Was there a neoplastic length cut-off beyond which stenting was considered to be infeasible? Or what was the exact purpose of measuring the neoplastic infiltration length?

Reply:

i. Stenoses less than 10 mm in diameter were dilated. Such a narrow stenosis may make it difficult to place the prosthesis, and severe pain may occur after its expansion. This observation is based on our own experience after placing more than 500 esophageal stents in esophageal cancer [1]

ii. Although the length of the stenoses was quite short (average 3.4 cm), each stenosis had to be measured in order to select and use the correct stent length. There was no cut-off lenght or a single case where esophageal stenting was considered unfeasible.

1. Janusz R. Włodarczyk, Jarosław Kużdżał. Stenting in palliation of unresectable esophageal cancer. World J of Surg. 2018 Dec;42(12):3988-3996. doi: 10.1007/s00268-018-4722-7.

II. For patients with esophageal compression without compression of the bronchial tree

i. What was the stage/ type/ anatomic characteristics of lung cancer that caused significant esophageal compression without bronchial tree compression/ obstruction?

ii. What were the characteristics of lung cancer in patients that developed bronchial stenosis after esophageal stent placement?

iii.

iv.

v. Was bronchoscopy routinely performed after esophageal stenting to determine airway stenosis? What was the protocol for when to look for/ determine severity of/ determine need for bronchial stenting after esophageal stenting? How long after the esophageal stenting did the 2.4% patients require airway stents?

Reply:

i. In the analyzed group, the stage of advancement was classified as T4N1-2M0

ii. Among patients with lung cancer, the decisive factor was the local advancement of left hilar cancer with mediastinal infiltration involving the

esophagus and the immediate vicinity or deformation of the bronchial tree. The second reason was enlarged mediastinal lymph nodes of group 7, especially among patients with small cell carcinoma (main document, p.7, line: 230-232)

iii. Yes, bronchoscopy was performed routinely during stenting. We recommend performing bronchoscopy after esophageal stenting, especially in the group of patients with bronchoconstriction without clinical symptoms, but also as monitoring during planned follow-up visits [1]. We do not perform prophylactic stenting of the bronchial tree. A follow-up after 30 days was routinely planned, and in the case of clinical deterioration, the patient was presented with increasing clinical symptoms (deterioration of breathing or swallowing comfort)

iv. Two (2.4%) patients from group I developed clinically important bronchial tree stenosis, presenting dyspnea after esophageal stenting and required additional airways stenting within 12 hours from the initial procedure, during hospital stay (main document, p.5, line: 154-155)

III. In all the 3 groups, what the PEG placement decision based on?

Reply: The decision on PEG implantation was made individually, but the main indication was to maintain the patients' energy needs. This concerned patients with weight loss, anorexia, where maintaining a normal BMI is crucial [2,3]. The second group consisted of patients with double stenting, whose advanced cancer usually does not allow them to maintain their energy needs.

2. Włodarczyk J, Gil T, Warmuz J, Grochowski Z, Gocyk W, Kocoń P, Talar P, Smęder T, Kużdżał J. Double stenting for malignant airway and esophageal obstructions. Dis. Esophagus.
3. Janusz R. Włodarczyk, Jarosław Kużdżał. Safety and efficacy of oesophageal stenting with simultaneous percutaneous endoscopic gastrostomy as a supplementary feeding route in unresectable proximal oesophageal cancer.Videosurgery and Other Miniinvasive Techniques 2018 : Online publish date: 2018-02-07

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IV. Major complications: When did the respiratory fistula, and bronchial tree and esophageal stenosis develop? Were these discovered on routine follow up procedures, or was the discovery symptom-driven? For the patients that developed the fistulas, what was the underlying cancer type/ group (esophageal compression with or without airway obstruction)?

Reply: The respiratory fistula developed on the 39th and 63rd postoperative day, while the narrowing of the bronchial tree occurred immediately after stenting. Respiratory fistula occurred in the course of adenocarcinoma.

Corrected as suggested by the reviewer. Text improved.
Changes in the text: P:6 ; L: 191-192

V. Reintervention: What were the characteristics of the patients that developed granuloma formation in the esophageal stent/ obstruction of the tracheal stent and required removal/ replacement of the prosthesis?

Reply: The mechanism of granulation formation is not fully understood, but we associate it with the properties of the material (e.g. nitinol) and their interrelationship with the host tissue and optimal placement of the prosthesis
We present a detailed analysis in our own work:

Paulina Chytrosz , Monika Golda-Cepa , Janusz Wlodarczyk , Jarosław Kuzdzal , Miroslawa El Fray , Andrzej Kotarba. Characterization of Partially Covered Self-Expandable Metallic Stents for Esophageal Cancer Treatment: *In Vivo* Degradation ACS Biomater Sci Eng 2021 Apr 12;7(4):1403-1413. doi: 10.1021/acsbiomaterials.0c01773.Epub 2021 Mar 12.

VI. Survival: How can it be said with certainty that chemo or radiation did not affect surivial while there was no randomization or matching in any way involved? Which groups are the authors talking about when they say there was no difference in survival with chemo or radiation?

Reply: We agree with the reviewer that it is difficult to assess the outcome of survival after treatment in the study group. The study is retrospective with prospective observation of patients. The group is heterogeneous and included patients who continued the next line of

chemotherapy, as well as patients who did not qualify for its implementation and/or implementation of the next line. In addition, the results may be affected by the short observation time associated with the short survival of patients (average survival 108-160 days). Nevertheless, we compared both groups of patients. We treat our results as preliminary, and the reviewer's comment as a contribution to improving the methodology in our proceedings.

Corrected as suggested by the reviewer. Text improved.
Changes in the text: P:9,10 ; L: 301-305