

“Risk of tumor implantation in percutaneous endoscopic gastrostomy in the upper aerodigestive tumors”. Can the “non-pull” methods and the surgical approaches be definitively discarded?

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To The Editor,

a few weeks ago a 77 years old female presented to our attention for an abdominal wall mass at the previous percutaneous endoscopic gastrostomy (PEG) exit site; patient had been affected by an obstructive tongue cancer (causing dyspnoea and dysphagia), effectively treated with a combined surgical and chemotherapeutic approach. Since a good response to the therapies had been observed, with no residual signs of disease, PEG tube had already been removed for two years. As the histology of the novel abdominal wall lesion resulted in a metastatic localization of the previous cancer, the patient underwent a subtotal gastrectomy with an en bloc resection of the abdominal wall (Fig 1).

As the PEG had been implanted with a “pull method”, we blamed it on the PEG placement strategy, with the belief that the “pull method” had led to a dragging of the neoplastic cells to the PEG exit site.

Our opinion changed after reading with great interest the review “Risk of tumor implantation in percutaneous endoscopic gastrostomy in the upper aerodigestive tumors” published on Your journal (Acta Biomed 2018; Vol. 89, Supplement 8: 117-121)(1). First of all, We’d like to congratulate with the authors for the accuracy and efficacy of their article.

In the first part of it, a well organized explanation of the current techniques for PEG placement is carried

out, including the Gauderer-Ponsky “pull”, the Russell “introducer”, the Sacks-Vine “push” and radiologic assisted methods (1).

In the second part of the study, after a comprehensive review from 2008 to 2018, the authors find out more than 50 cases of abdominal wall metastases after PEG placement in patients affected by upper aerodigestive cancers (1).

Vincenzi F et al’ article, such as Montes De Oca MK et al’ one or Rowell NP’s paper, doesn’t indicate any statistically significant correlation between the “pull strategy” and the metastatic risk to the gastrostomy site as compared to the other approaches, so that the Authors conclude that, to date, the “pull method” is safe and effective for PEG placement in patients with aerodigestive cancers, so that there is no reason to change PEG strategy in such patients (1,2).

As well underlined in the article by Fung E. et al, there are several theories regarding the pathogenesis of tumor seeding involving the PEG site (4). The two most likely hypotheses propose either a dragging of the neoplastic cells during the tube passage across the primary tumor or an hematogeneous dissemination towards the PEG tube site (2-4). To date, there is a lack of agreement concerning the pathogenesis of tumoral seeding, and no univocal theory is completely recognized (1,4,5).

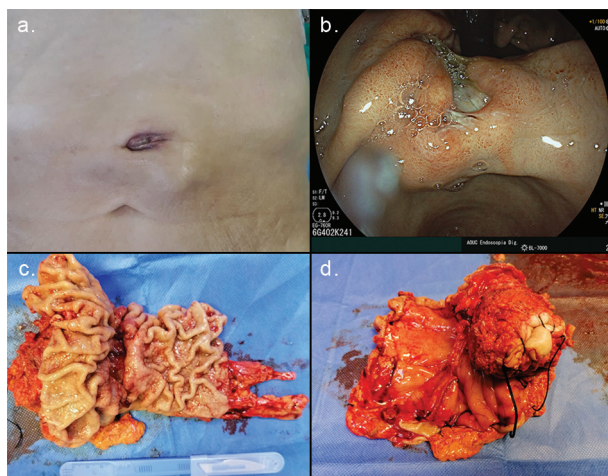


Figure 1. a) Skin appearance of the metastasis at the previously placed PEG exit site; b) Endoscopic view of the metastatic implantation to the previous PEG exit site; b-c) Macroscopic appearance of the resected specimen, including the subtotal gastrectomy with an en bloc resection of the abdominal wall.

As explained by Montes De Oca MK et al, it's reasonable that several and different mechanisms may play a role within the same patients rather than a single tumor implantation method. This is strengthened by the consideration that no statistical association emerged between PEG placement method and risk of PEG site metastasis, suggesting no relationship between PEG implantation method and metastases(4-6). Moreover, gastrostomy site metastases have been described also in cases of surgical placement, thus without the passage of the endoscopic tube across the primary aerodigestive neoplasm (1,4).

In conclusion, in the light of such considerations, unless occurring a complete obstruction of the aerodigestive tract, could be reasonable in the next future to discard definitively the “non-pull” placement strategies?

In particular, even if occurring a complete obstruction of the aerodigestive tract (so that even the passage of the endoscopic shaft is unable), considering the high morbidity of the surgical strategies, could be reasonable in the next future to discard definitively themselves (1,4,6)?

Conflict of Interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

Informed Consent: A written informed consent form was obtained before performing the surgical operation.

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References

- Vincenzi F, De Caro G, Gaiani F, et al. Risk of tumor implantation in percutaneous endoscopic gastrostomy in the upper aerodigestive tumors. *Acta Biomed.* 2018 Dec 17;89(8-S):117–121.
- Montes de Oca MK, Nye A, Porter C, et al. Head and neck cancer PEG site metastases: Association with PEG placement method. *Head Neck.* 2019 May;41(5):1508–1516.
- Rowell NP. Tumor implantation following percutaneous endoscopic gastrostomy insertion for head and neck and oesophageal cancer: Review of the literature. *Head Neck.* 2019 Jun;41(6):2007–2015.
- Fung E, Strosberg DS, Jones EL, et al. Incidence of abdominal wall metastases following percutaneous endoscopic gastrostomy placement in patients with head and neck cancer. *Surg Endosc.* 2017 Sep;31(9):3623–3627.
- Siu J, Fuller K, Nadler A, et al. Metastasis to gastrostomy sites from upper aerodigestive tract malignancies: a systematic review and meta-analysis. *Gastrointest Endosc.* 2020 Jan 8.
- Metkus JS, Cognetti D, Curry J. Percutaneous gastrostomy site metastasis from head and neck tumors: A single institution case series. *Laryngoscope Investig Otolaryngol.* 2017 Nov 22;2(6):395–397.

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