

Assessment of Tumor Size Changes After Neoadjuvant Chemotherapy in Locally Advanced Esophageal Cancer: An Original Article

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ABSTRACT

Objective: Assessment of respectability may be regarded as a key component of esophageal cancer treatment. Neoadjuvant therapies may be considered particularly in the setting of locally advanced esophageal cancer. While surgery alone may be adequate for selected patients, incorporation of neoadjuvant or adjuvant therapeutic strategies may be considered with respect to patient, tumor, and treatment characteristics. In this study, we focused on tumor size changes in locally advanced esophageal cancers treated by neoadjuvant chemotherapy.

Materials and Methods: Primary objective of this study was to focus on changes in tumor size following neoadjuvant chemotherapy for locally advanced esophageal cancer. To accomplish this tedious task, we have focused on patients with locally advanced esophageal cancers having available imaging data as part of the initial workup. Selected patients received neoadjuvant chemotherapy for locally advanced esophageal cancers. We have performed a comparative analysis for tumor sizes at diagnostic imaging data of the patients and at reevaluation imaging data after neoadjuvant chemotherapy.

Results: We have revealed that there has been a mean decrease of 29% in tumor size after neoadjuvant chemotherapy in our selected group of patients with locally advanced esophageal cancer.

Conclusion: Widely accepted endpoints in studies focusing on neoadjuvant therapeutic strategies include pathological complete response rates, overall survival, and toxicity. Nevertheless, our results may have some critical implications from the standpoint of oncological management for patients with locally advanced esophageal cancers and further studies may be needed.

Keywords: Locally Advanced Esophageal Cancer; Neoadjuvant Chemotherapy; Surgery

Introduction

Esophageal cancers compose a considerable proportion of gastrointestinal cancers, and these tumors may be treated by using several therapeutic alternatives in the forms of surgical resection, radiotherapy (RT), systemic agents [1-18]. Indeed, esophagus cancers are not so uncommon, and both the disease itself and utilized therapies may lead to morbidity in affected patients which could be quite unpleasant from the perspectives of quality of life and treatment results. Assessment on respectability may be regarded as an important aspect. In-

duction therapies may be considered particularly in setting of disease with locoregional spread [1-18]. The rationale behind using induction systemic therapy or chemoradiotherapy is to achieve increased local tumor control along with increased life years of patients. However, other factors like treatment induced toxicity should also be taken into account in decision making for achieving optimal results. Clearly, tumor boards may serve as an excellent way of collecting together relevant disciplines to discuss individual patients, disease, and treatment characteristics. Multidisciplinary collaboration among these disciplines is mandatory to provide a consensus for treatment. While

surgery alone may offer a viable therapeutic approach in selected patients, incorporation of neoadjuvant or adjuvant treatment concepts may also be beneficial regarding the patient, tumor, and treatment characteristics. In this study, we focused on tumor size changes in locally advanced esophageal cancers treated by neoadjuvant chemotherapy. We documented changes in tumor size following neoadjuvant chemotherapy in patients with locally advanced esophageal cancers.

Materials and Methods

As a tertiary referral institution, we been treating a huge patient population from several places from Turkey and abroad for many decades. At our tertiary cancer center, several benign and malignant tumors are irradiated. The primary objective of this study was to look into changes in tumor size following neoadjuvant chemotherapy for locally advanced esophageal cancer. To accomplish this tedious task, we have focused on patients with locally advanced esophageal cancers having available imaging data as part of the initial workup. Selected patients received neoadjuvant chemotherapy for locally advanced esophageal cancers. We performed a comparative analysis for tumor sizes at diagnostic imaging data of the patients and at reevaluation imaging data after neoadjuvant chemotherapy.

Results

Our original research article primarily focused on assessment of changes in tumor size following neoadjuvant chemotherapy for locally advanced esophageal cancers. Initially, all patients were individually evaluated by a multidisciplinary team of experts. Patients with locally advanced esophageal cancer having available imaging data as part of initial workup were selected. These selected patients had received neoadjuvant chemotherapy and later were reassessed by subsequent imaging. We performed a comparative analysis for tumor sizes at diagnostic imaging data of the patients and at reassessment imaging data after neoadjuvant chemotherapy. Changes in tumor size following neoadjuvant chemotherapy have been documented for comparative analysis. We have revealed that there was a mean decrease of 29% in tumor size after neoadjuvant chemotherapy in our selected group of patients with locally advanced esophageal cancer.

Discussion

Esophageal cancers constitute an important part among gastrointestinal cancers, and these tumors may be treated by using several therapeutic options such as surgery, RT, and systemic agents [1-18]. Esophageal cancers are not so uncommon, and it should be noted that both the disease itself and utilized therapies could result in extensive burden and morbidity. Evaluation of resectability may be regarded as an indispensable aspect of contemporary esophageal cancer treatment. Neoadjuvant treatments may be considered especially in the setting of locally advanced esophageal cancer [1-18]. The rationale behind using the neoadjuvant therapeutic approaches such as neoadjuvant chemotherapy or chemoradiotherapy is to achieve

improved local tumor control and survival outcomes. Nevertheless, other factors such as treatment induced toxicity should be thought up in decision making for therapy. Admittedly, tumor boards may offer an excellent way for gathering important disciplines such as surgical oncology, medical oncology and radiation oncology to discuss individual patients, disease, and treatment characteristics. Critical decision making must include multidisciplinary input from these disciplines. While surgery alone may be regarded as the therapeutic approach for a selected group of esophageal cancer patients, addition of neoadjuvant or adjuvant therapeutic strategies may be taken into account with regard to patient, tumor, and treatment characteristics. In this study, we focused on tumor size changes in locally advanced esophageal cancers treated by neoadjuvant chemotherapy.

We documented changes in tumor size following neoadjuvant chemotherapy in patients with locally advanced esophageal cancers. We have revealed that there was a mean decrease of 29% in tumor size after neoadjuvant chemotherapy in our selected group of patients with locally advanced esophageal cancer. Clearly, response assessment after neoadjuvant therapeutic strategies may be critical. Widely accepted endpoints in studies focusing on neoadjuvant therapeutic strategies include pathological complete response rates, overall survival, and toxicity. Nevertheless, our results may have some critical implications from the standpoint of oncological management for patients with locally advanced esophageal cancers and further studies may be needed.

Conflict of Interest

There are no conflicts of interest and no acknowledgements.

References

1. Arnold M, Ferlay J, van Berge Henegouwen MI, Soerjomataram I (2020) Global burden of oesophageal and gastric cancer by histology and subsite in 2018. *Gut* 69(9): 1564-1571.
2. Waters JK, Reznik SI (2022) Update on Management of Squamous Cell Esophageal Cancer. *Curr Oncol Rep* 24(3): 375-385.
3. Weidenbaum C, Gibson MK (2022) Approach to Localized Squamous Cell Cancer of the Esophagus. *Curr Treat Options Oncol* 23(10): 1370-1387.
4. Fountoulakis A, Souglakos J, Vini L, Douridas GN, Koumariou A, et al. (2019) Consensus statement of the Hellenic and Cypriot Oesophageal Cancer Study Group on the diagnosis, staging and management of oesophageal cancer. *Updates Surg* 71(4): 599-624.
5. Rubenstein JH, Shaheen NJ (2015) Epidemiology, Diagnosis, and Management of Esophageal Adenocarcinoma. *Gastroenterology* 149(2): 302-17.e1.
6. Pennathur A, Gibson MK, Jobe BA, Luketich JD (2013) Oesophageal carcinoma. *Lancet* 381(9864): 400-412.
7. Bolger JC, Donohoe CL, Lowery M, Reynolds JV (2022) Advances in the curative management of oesophageal cancer. *Br J Cancer* 126(5): 706-717.
8. Cellini F, Manfrida S, Casà C, Romano A, Arcelli A, et al. (2022) Modern Management of Esophageal Cancer: Radio-Oncology in Neoadjuvancy, Adjuvancy and Palliation. *Cancers (Basel)* 14(2): 431.

9. Rogers JE, Sewastjanow-Silva M, Waters RE, Ajani JA (2022) Esophageal cancer: emerging therapeutics. *Expert Opin Ther Targets* 26(2): 107-117.
10. Zhou N, Rajaram R, Hofstetter WL (2020) Management of Locally Advanced Esophageal Cancer. *Surg Oncol Clin N Am* 29(4): 631-646.
11. Yang H, Liu H, Chen Y, Zhu C, Fang W, et al. (2018) Neoadjuvant Chemoradiotherapy Followed by Surgery Versus Surgery Alone for Locally Advanced Squamous Cell Carcinoma of the Esophagus (NEOCRTEC5010): A Phase III Multicenter, Randomized, Open-Label Clinical Trial. *J Clin Oncol* 36(27): 2796-2803.
12. Tang H, Wang H, Fang Y, Zhu JY, Yin J, et al. (2023) Neoadjuvant chemoradiotherapy versus neoadjuvant chemotherapy followed by minimally invasive esophagectomy for locally advanced esophageal squamous cell carcinoma: a prospective multicenter randomized clinical trial. *Ann Oncol* 34(2): 163-172.
13. Nakashima Y, Saeki H, Hu Q, Tsuda Y, Hisamatsu Y, et al. (2018) Neoadjuvant Chemotherapy Versus Chemoradiotherapy for Patients with Esophageal Squamous Cell Carcinoma. *Anticancer Res* 38(12): 6809-6814.
14. Li J, Ma S (2021) History and current situation of neoadjuvant treatment for locally advanced esophageal cancer. *Thorac Cancer* 12(17): 2293-2299.
15. Kumar T, Pai E, Singh R, Francis NJ, Pandey M (2020) Neoadjuvant strategies in resectable carcinoma esophagus: a meta-analysis of randomized trials. *World J Surg Oncol* 18(1): 59.
16. Zhao Y, Wang Y, Shan L, Peng C, Zhang W, Zhao X (2021) A network meta-analysis for neoadjuvant and adjuvant treatments for resectable squamous cell carcinoma of esophagus. *Sci Rep* 11(1): 6800.
17. van der Wilk BJ, Eyck BM, Lagarde SM, van der Gaast A, Nuyttens JJME, et al. (2019) The optimal neoadjuvant treatment of locally advanced esophageal cancer. *J Thorac Dis* 11(Suppl 5): S621-S631.
18. Leng XF, Daiko H, Han YT, Mao YS (2020) Optimal preoperative neoadjuvant therapy for resectable locally advanced esophageal squamous cell carcinoma. *Ann N Y Acad Sci* 1482(1): 213-224.

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