

Evaluation of 18F-FDG PET/CT in Nodal Staging of Primary Squamous Cell Carcinoma of Esophagus: A Comparison with CECT

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BACKGROUND

Esophageal cancer is one of the most fatal cancers with poor prognosis. Early and accurate determination of the extent of disease with conventional imaging modalities help in prompt treatment management.

AIMS AND OBJECTIVES

To evaluate the outcomes of 18F-FDG PET/CT in nodal metastasis of primary esophageal carcinoma and its comparison with contrast enhanced CT (CECT).

MATERIALS AND METHODS

From 2017 to 2020, 61 Patients with squamous cell carcinoma (SCC) of esophagus (27males and 34females, age range; 14-75, mean 46.8) who had undergone F18-FDG PET/CT and CECT with a time window of 1 month before any surgery or other treatment strategy were included in this study. The depiction capability of F18-FDG PET/CT for individual lymph nodes metastasis group were compared with the findings of CECT images.



Figure 1.1 showing increased 18F-FDG uptake in (A) paratracheal, (B) Celiac and (C) Paraortic Lymphnodes in PET-CT fused images.

RESULTS

Overall PET/CT detected nodal metastasis in 95% of patients while CECT detected nodal metastasis in 86.8%. PET/CT identified mediastinal lymph nodes in (44/61) 72% of cases, compared to (38/61) 62% of CECT cases. Abdominal lymph nodes depicted by PET/CT in (16/61) 26% of cases, compared to (10/61) 16% of cases by CECT. PET/CT showed cervical lymph nodes metastasis in (1/61) 2% of cases while CECT showed cervical lymph nodes metastasis in (2/61) 3% of total patients. Apart from the nodal staging, PET/CT detected bone metastasis in (4/61) 6% of patients and CECT detected bone metastasis in (1/61) 2% of patients.

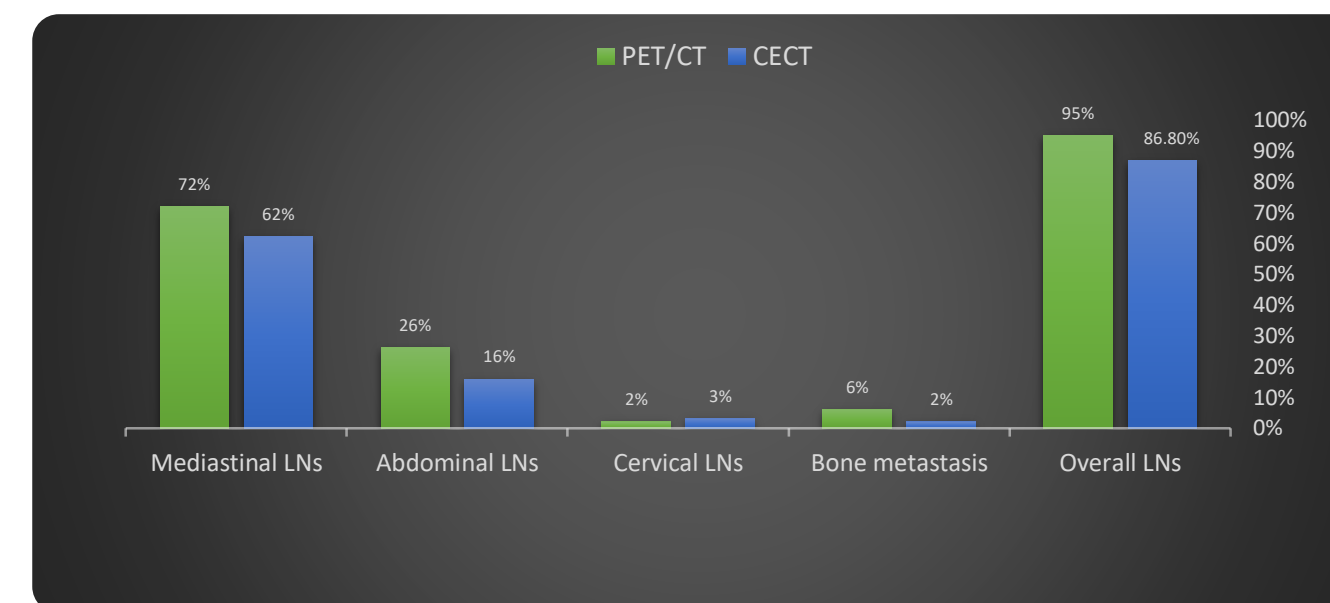


Table 1: Detection of metastatic LNS in PET-CT and CECT

CONCLUSION

F18-FDG PET/CT is more reliable than CECT for the evaluation of nodal metastasis in primary squamous cell carcinoma of esophagus. Whole body PET/CT can further facilitate in distant metastasis (M) staging and can alter the treatment management in patients with primary SCC of esophagus.