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CAN WE USE THE PET/CT IMAGING FOR LOCAL STAGING IN ADVANCED GLOTTIC CANCER? CLINICAL IMPACT AND COMPARISON WITH CONVENTIONAL IMAGING

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BACKGROUND-AIM

This study assessed the role of [(18) F-FDG PET-CT] (PET/CT) to detect the cartilage and commissure infiltration during staging of advanced glottic cancer in comparison with conventional imaging (CI) [Computed Tomography and /or Magnetic Resonance].

METHODS

We retrospectively analyzed 26 patients with glottic squamous cell carcinoma stage III and IV, treated in our institute between 2006 and 2011, comparing the PET/CT , used to staging and radiotherapy planning, and the CI findings. Cohen's K was used to compare concordance between the two techniques. Imaging findings were correlated with endoscopic evaluation and biopsy results.

RESULTS

Sensitivity, specificity and accuracy of PET/CT was 95%, 83% and 92.3 % respectively and 85%, 83% and 84.6% for CI. All lesions shown by CI were also highlighted by PET/CT imaging and in 6 cases more lesions were emphasized offering a better definition of local infiltration with PET/CT then CI (5 CT and 1 MRI). Cohen's K was 0.69. 1 FN and 1 FP were observed with PET/CT and 3 FN and 1 FP with CI.

CONCLUSION

The PET/CT is useful to evaluate the local invasion, in terms of cartilage and commissure infiltration, in advanced glottic tumors showing a higher sensitivity and accuracy compared to CI. Therefore, PET/CT could be used as imaging method of choice also for local staging in these cases integrating the traditional endoscopic techniques