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Occult metastases of oral maxillary squamous cell carcinoma: Systematic review and meta-analysis

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*From the **Head Neck.** March 2023.*

Abstract: Squamous cell carcinoma (SCC) is the most common malignant neoplasm of the oral cavity. The performance of END (elective neck dissection) in cases of maxillary SCC is controversial because the literature traditionally classified maxillary tumors as having low metastatic potential. The aim of this systematic review and meta-analysis was to determine the percentage of occult cervical metastases in maxillary SCC to identify in which cases there is the need to perform an END. We searched the PubMed database to select articles dated from 2000 to 2020 that fulfilled our inclusion criteria; finally, we reviewed 27 manuscripts. We show that the overall cervical and occult metastases rate was 35% and 19%, respectively. For T1, the percentage of occult metastasis rate was 11%; for T2, it was 16%; for T3, it was 20%; and for T4, it was 32%. We suggest END (levels I-II-III) as treatment to T3/T4 cN0 patients.

Summary Statements:
In this meta-analysis the authors identified 27 papers (n = 2162) that fulfilled the inclusion criteria (maxillary squamous cell carcinoma and lymphatic disease) from 2000 – 2020. Regardless of T stage global cervical metastatic rate was 35%, while the global occult metastatic rate was 20%. Identified metastatic rates as follows to T classification: 11% for T1 tumors, 16% for T2 tumors, 20% for T3 tumors and up to 32% for T4 tumors. Levels I – III were most commonly involved with occult malignancy, while levels IV-V were involved in maxillary cases with recurrence where levels I – III had already been dissected. General recommendation is therefore to perform an END in CN0 maxillary squamous SCC with T3 and T4 classification.

Strengths

- Builds on a previous study by Zhang et al *(Zhang WB, Peng X. Cervical metastases of oral maxillary squamous cell carcinoma: a systematic review and meta- analysis. Head Neck. 2016;38:E2335-E2342. doi:10.1002/hed. 24274)* which reviewed articles from 2000 until December 2013.
- Therefore, we now have 20 years of data to guide treatment for maxillary squamous SCC and the clinically N0 neck.

Weaknesses

- There is a heterogeneity of data and several biases that are inherent to systematic reviews and meta-analysis regardless of study design.
- Not a weakness but rather a future direction - more to come in regard to analyzing T1 and T2 tumors particularly as SLNB becomes more widely adopted.

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Incidental FDG-Avid Focuses in Palatine Tonsils on PET/CT

Kasper Basse Reinholdt, MD ; André Henrique Dias, MD; Camilla Molich Hoff, MD, PhD; Lars Christian Gormsen, MD, PhD; Tejs Ehlers Klug, MD, DMsci

From the **Laryngoscope.** *December 2022.*

Objective: The management of incidental findings of FDG-avid tonsils on PET/CT (IFT) is unclear. We aimed to explore the prevalence of malignancy in IFT, identify risk factors for malignancy, and calculate optimal cutoffs of maximum standardized. uptake values (SUVmax) to discriminate between benign and malignant lesions.

Methods: All patients who were tonsillectomized at our institution because of IFT from October 2011 to December 2020 were included. Patients undergoing PET/CT due to suspected tonsillar. disease or cancer of unknown primary were excluded.

Results: In total, 77 patients were included, of which 11 (14%) of them had IFT malignancy. Dysphagia ($p = 0.019$) and alcohol abuse ($p = 0.035$) were associated with malignancy. Absolute SUVmax cutoff (≥9: sensitivity 100%; specificity 53%) was superior to SUVmax side-to-side ratio (≥1.5: sensitivity 64%; specificity 70%) to discriminate between benign and malignant lesions.

Conclusions: We recommend tonsillectomy for patients with IFT displaying SUVmax ≥ 9.0, ratio ≥ 1.5, or symptoms or findings suggesting malignancy.

Summary Statements:

- Tonsillectomy is recommended in patients with incidental FDG-avid uptake in the tonsils with an SUV of >9. Most patients (64%) with tonsillar malignancy did not have any symptoms.

Strengths

- Excellent review with comparisons between post tonsillectomy surgical path and preoperative PET/CT results.
- Easy to read and understand.
- The study included only patients with true IFT and not those undergoing PET/CT for suspected malignancy.
- Provides valuable insight into a clinical question commonly faced in day-to-day practice.

Weaknesses

- Small number of patients (77)
- Retrospective, clinical data (physical exam findings) were taken from the chart. Some of the exams were limited/not exhaustive.

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Tumor Satellites Are Associated with Poor Outcome in Patients with Oral Cancer

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From **Laryngoscope.** February 2023.

Objective: Tumor satellites are defined as islands of tumor cells completely separated from the border of the main tumor. They are believed to be a sign of aggressive disease. Our goal was to investigate the association between tumor satellites and outcome in patients with oral squamous cell carcinoma.

Methods: A retrospective analysis of all patients treated for oral squamous cell carcinoma at a university affiliated tertiary care center between 2010 and 2018 was performed. Data collected included demographics, clinical and pathological features including tumor satellites, staging, treatment modalities, and outcomes.

Results: A total of 144 patients were included. The mean age of all patients was 63.5 and 50.7% were males. The mean follow-up time was 40.5 months. Seventeen patients (11.8%) had tumor satellites. These patients had a higher rate of involved margins, peri-neural invasion, lympho-vascular invasion, and extra-nodal extension. Tumor, nodal and overall classification were significantly more advanced in patients with satellites. Disease-specific and overall survival rates were significantly lower among satellites patients (28.7% vs. 59.7% and 28.7% vs. 54.9%, respectively).

Conclusions: Tumor satellites are associated with several adverse features and advanced locoregional disease. Patients with satellites should be treated aggressively with a combination of surgery aimed at achieving free surgical margins and adjuvant treatment, as they have a worse prognosis compared with patients without satellites. Further prospective studies are mandatory to consolidate the importance of adjuvant treatment in these patients.

Summary Statements:

- In patients with oral cancer the presence of tumor satellites is associated with adverse pathologic features and advanced locoregional disease. Aggressive treatment is recommended.

Strengths

- Pathological review by a single experienced H&N pathologist
- Demonstration of strong correlations between patients with the presence of tumor satellites and higher rate of involved margins, peri-neural invasion, lympho-vascular invasion, extra-nodal extension and advanced tumor, nodal and overall classification.
- Multiple oral subsites (most were oral tongue)
- Excellent figures supported the paper well.

Weaknesses

- Small number of patients (144) with 11.8% having tumor satellites (17 patients). Thus, correlations were made based on 17 total patients.
- Retrospective

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