

Need for dental treatment of oral cancer patients prior to cancer therapy



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BACKGROUND

- Average 300 new cases of oral squamous cell carcinoma (OSCC) are diagnosed annually in Finland.
- In Finland, the 5-year survival rate for OSCC is in males 61 % and females 67 %.
- Poor oral health has been suggested as an etiological factor for OSCC and decreasing prognosis.
 - Poor oral hygiene score was associated with a significant risk of OSCC (adjusted OR=6.98; 95%CI 3.72-13.05). Gupta et al. 2017.
 - Oral health and survival among head and neck SCC cases have significant association. Farquhar et al., Oral Oncol. 2017.
- Dental examination and treatment before OSCC therapy is required to avoid complications.

OBJECTIVES

How much dental treatment is needed for OSCC patients at the time of their OSCC diagnosis?

Does patients with poor oral health have larger and/or more spread OSCC tumors (TNM staging)?

MATERIALS AND METHODS:

- Ethical permission (114/2018) from Ethics Committee, Hospital District of Southwest Finland
- Retrospective registry-based study in hospital district of Southwest Finland, Turku, Finland
- All primary OSCC patients diagnosed during 2005-2015 were included in this study (Fig. 1.)
- Need for dental treatment was investigated from panoramic radiograph (PTG) (Fig. 2.)

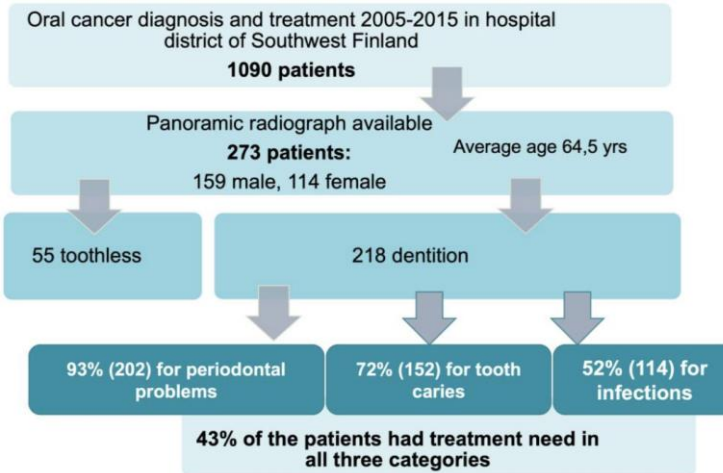


Figure 1. Study flow and division of dental treatment needs

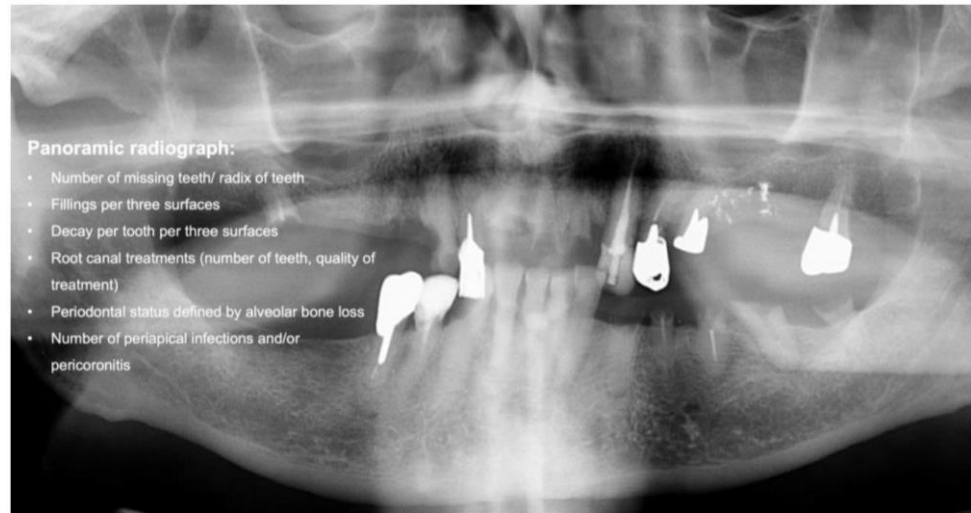


Figure 2. Evaluations from panoramic tomographs

| | T | N | M |
|------------|------------|------------|------------|
| 0 | - | 150 (55 %) | 261 (96 %) |
| 1 | 56 (21 %) | 51 (19 %) | 3 (1 %) |
| 2 | 107 (39 %) | 64 (23 %) | - |
| 3 | 45 (16 %) | 1 (1 %) | - |
| 4 | 64 (23 %) | - | - |
| Unknown | 1 (1 %) | 7 (2 %) | 9 (3 %) |
| Altogether | 273 | 273 | 273 |

Figure 3. TNM stage

RESULTS:

- 273 patients were included in this study (Fig. 1.)
- OSCC originated from mobile tongue in 66% and from gums, retromolar and tuber area in 31% of the cases.
- 215 (99%) of OSCC patients with teeth needed dental treatment at the time of their OSCC diagnoses (Fig. 1.)
 - 93% had periodontal disease
 - 72% had decayed tooth/teeth
 - 52% had periapical infections or pericoronitis
- Altogether, 43% of the patients had treatment need in all these three categories.

STATISTICAL ANALYSIS:

- No correlation was found between larger size of OSCC (T-category), neck metastasis (N), distant metastatic spread (M) or TNM stage and high need for dental care.

CONCLUSIONS:

- Almost all OSCC patients with teeth needed dental treatment before their OSCC therapy
 - This may delay cancer therapy and decrease patient survival
 - This increases economical burden of OSCC patient treatment
- There was no evidence that OSCC patients with poor oral health had more advanced OSCC in this study.