

## LONG TERM EVALUATION OF ORAL HEALTH INDICES IN PATIENTS WHO UNDERGONE HEAD AND NECK RADIATION THERAPY, IN ASSOCIATION WITH VITAMIN E (CASE-CONTROL GROUP)

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**AIM** Most head and neck cancers are squamous cell carcinomas that develop in the upper aerodigestive epithelium (oral cavity, pharynx, larynx) after exposure to carcinogens such as tobacco, alcohol, or to some virus (HPV, Epstein Barr). Treatments for this kind of cancer are: surgery, radiotherapy and chemotherapy, which are often combined. Many are the complications associated with radiotherapy such as xerostomia, mucositis, caries, trismus, candidiasis, dysgeusia, dysphagia and osteoradionecrosis. Management of oral health is especially important in order to limit side effects. Therefore, the aim of this study was to evaluate, in the long term, the maintenance of oral health indices in patients who had undergone head and neck radiation therapy, in association with vitamin E (case-control group).

**METHODS** An observational study was conducted to evaluate, in the long term, the oro-dental characteristics of patients undergoing head and neck radiotherapy, in association with vitamin E.

This study is the forth stage of work which started in April 2013. It includes an oro-dental assessment in 35 months. 17 patients with cancer (4 f., and 13 m.), aged between 48 and 72, were selected, then divided into a case group (7 patient) which received products containing vitamin E, and a control group which didn't receive products containing vitamin E.

Each patient was informed about the protocol approved by the ethical Committee of our Institution . They sign an informed consent and have been evaluated by a single dental hygienist. During each visit (T0, T1,T2) the patients received a questionnaire, then the dental hygienist performed an extra-oral examination, an intra-oral examination, a detection of oral health indices through the use of a plaque index and a bleeding index (Ainamo & Bay 1975), motivation and home oral hygiene education, professional cleaning. Professional cleaning was performed using an ultrasonic scaler above and below the gum, soft non-abrasive cups, prophylaxis paste (RDA <40).

**RESULTS** To manage the side effects a good oral health is necessary, which can be reached by a perfect plaque control (patient compliance). The effectiveness of our protocol of study is evident, as both indices (plaque and bleeding) were significantly reduced from T0 to T11. Plaque index average: T0: 79%, T11: 5%. Bleeding index average: T0: 69%,T11: 3%. The vitamin E reduced pain and burning sensation.

**CONCLUSION** Patients who undergone radio-therapy, are special needs patient. The role of a dental hygienist is essential in following up oral hygiene and food habits, in short, medium and long term. Also vitamin E, can give a good relief from pain and burning sensation (although more clinical evaluation need to be done).