

## ***2229 Saliva Changes 1-year after Intensity-modulated/Conventional Radiotherapy for Nasopharyngeal Carcinoma***

**E.H.N. POW**<sup>1</sup>, A.S. MCMILLAN<sup>1</sup>, W.K. LEUNG<sup>1</sup>, M.C.M. WONG<sup>1</sup>, and D.L.W. KWONG<sup>2</sup>, <sup>1</sup>University of Hong Kong, Faculty of Dentistry, Hong Kong, <sup>2</sup>Faculty of Medicine, Hong Kong

Xerostomia is the main oral problem of radiotherapy to the head and neck region. Intensity-modulated radiotherapy is a novel technique which can spare the salivary glands from radiation damage. Objective: To compare the quantitative and qualitative changes in saliva of nasopharyngeal carcinoma (NPC) patients receiving conventional radiotherapy (CT) and intensity-modulated radiotherapy (IMRT). Methods: In a double-blind randomized clinical trial, evaluation points were just prior to, then 2, 6 and 12 months after treatment. 21 newly diagnosed southern Chinese NPC patients (18 males, 3 females, mean age 49 years, SD=10) were randomized to either CT or IMRT limbs of the study. At the 4 time points, saliva flow, pH and buffer capacity (BC) of stimulated whole (SWS) and parotid saliva (SPS) were measured. Wilcoxon signed ranks, Mann-Whitney and Chi-square tests were used to compare changes over time and between groups. Results: At 2-month recall, all subjects had significant reduction in SWS/SPS flow and SWS pH ( $p<0.01$ ). Improvement in SWS/SPS flow was observed in the IMRT group at 6-month and 12-month recall with a significant difference when compared with the CT group ( $p<0.01$ ). The SPS flow in the IMRT group was found to be returning to pre-treatment levels at 12-month evaluation. The SWS buffering capacity was impaired in both groups after radiotherapy but showed improvement at the 12-month point in the IMRT group ( $p<0.05$ ). No difference was found in SWS pH between groups throughout the study period. Conclusion: Intensity-modulated radiotherapy for nasopharyngeal carcinoma can minimize both quantitative and qualitative impairment of salivary gland function and allow full recovery of parotid salivary flow 1-year after treatment.

[Seq #232 - Treatment of Salivary Gland Disease](#)

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