

## **EFFECTS OF PILOCARPINE ON SALIVARY GLAND FUNCTION AFTER POSTOPERATIVE RADIOIODINE THERAPY FOR DIFFERENTIATED THYROID CANCER**

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**Background/Purpose:** The aim of this study was to investigate the effect of pilocarpine on salivary gland function in patients with postoperative  $^{131}\text{I}$  therapy-induced salivary dysfunction using a visual analog symptom scale and quantitative analysis of salivary flow rate, as well as salivary gland scintigraphy.

**Methods:** Fifty patients who had RI-induced salivary dysfunction (sialadenitis, xerostomia, or hypogeusia) after treatment of  $^{131}\text{I}$  for postoperative ablation of differentiated thyroid cancer were enrolled. 25 patients were assigned randomly to the pilocarpine treatment group, which received 5mg pilocarpine tid in addition to traditional conservative treatment such as hydration, sucking on sour candies or lemons, and massaging the affected gland, and 25 patients were assigned to the control group with only conservative treatment. Salivary dysfunction was graded according to a visual analog symptom scale before and 3 month after treatment. Salivary flow rate was measured and quantitative salivary gland scintigraphy was performed for analysis of salivary parenchymal function.

**Results:** There were no statistical differences in the mean age and the mean dose of  $^{131}\text{I}$  administered between 2 groups. The salivary symptom scale on sialadenitis was significantly improved in the treatment group compared to the control group. But pilocarpine treated group showed no significant improvement of the function parameter by salivary flow rate as well as quantitative salivary scintigraphy compared to the control group.

**Discussion & Conclusion:** Pilocarpine treatment reduced the occurrence of symptoms on salivary dysfunction. Salivary flow rate and scintigraphic parameters were not statistically different between the pilocarpine treated and control group, which suggest that adding pilocarpine to traditional sialogogues may not improve the parenchymal damage to salivary gland.