

Dysphagia severity following chemoradiation and postoperative radiation for head and neck cancer

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Abstract

Objective: The purpose of the study is to evaluate dysphagia severity following chemoradiation and postoperative radiation for head and neck cancer, and particularly the aspiration risk because of its potential life-threatening consequence.

Materials and methods: We reviewed retrospectively the modified barium swallow (MBS) results in 110 patients who complained of dysphagia following chemoradiation (57) and postoperative radiation (53) of their head and neck cancer. Patients were selected if they were cancer free at the time of the swallowing study. Dysphagia severity was graded on a scale of 1–7. Patients were grouped according to the dysphagia severity: mild (grades 2–3), moderate (grades 4–5), and severe (grades 6–7).

Results: Mean and median dysphagia grades were 4.84/5 and 4.12/4 for chemoradiation and postoperative radiation respectively. The mean difference between the two groups is statistically significant ($p=0.02$). Mild dysphagia occurred in 13 patients (22%) of the chemoradiation group and 17 (32%) of the postoperative group. Corresponding number for the moderate group was 25 (43%) and 25 (48%), respectively. Severe dysphagia was significant in the chemoradiation group (34%) compared to the postoperative group (19%). However, the difference was not statistically significant ($p=0.29$). There was a higher proportion of patients with large tumor (T3–T4) in the chemoradiation group who developed severe dysphagia.

Conclusion: Dysphagia remained a significant morbidity of chemoradiation and postoperative radiation for head and neck cancer. Dysphagia may be more severe in the chemoradiation group because of the higher proportion of patients with large tumor, the high radiation dose, and a high number of oropharyngeal tumors. Aspiration occurred in both groups. Diagnostic studies such as MBS should be part of future head and neck cancer prospective studies to assess the prevalence of aspiration, as it may be silent.

Keywords: Dysphagia; Aspiration; Modified barium swallow; Chemoradiation; Postoperative radiation