

## The Effect of Primary Treatment on Histopathological Patterns and Choice of Neck Dissection in Regional Failure of Nasopharyngeal Carcinoma Patients

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**Abstract :** Background: Regional failure in nasopharyngeal carcinoma (NPC) is managed by salvage treatment in the form of neck dissection. Radical neck dissection (RND) is preferred over modified radical neck dissection (MRND) since it is traditionally believed to offer better long-term disease control. However, with the advent of more advanced imaging modalities like high-resolution Magnetic Resonance Imaging, Computed Tomography, and Positron Emission Tomography-CT scans, earlier detection is achieved. Additionally, concurrent chemotherapy also contributes to reduced tumour burden. Hence, there may be a lesser need for an RND and a greater role for MRND. With this retrospective study, the primary aim is to ascertain whether MRND, as opposed to RND, has similar outcomes and hence, whether there would be more grounds to offer a less aggressive procedure to achieve lower patient morbidity. Methods: This is a retrospective study of 66 NPC patients treated at Singapore General Hospital between 1994 to 2016 for histologically proven regional recurrence, of which 41 patients underwent RND and 25 who underwent MRND, based on surgeon preference. The type of ND performed, primary treatment mode, adjuvant treatment, and pattern of recurrence were reviewed. Overall survival (OS) was calculated using Kaplan-Meier estimate and compared. Results: Overall, the disease parameters such as nodal involvement and extranodal extension were comparable between the two groups. Comparing MRND and RND, the median (IQR) OS is 1.76 (0.58 to 3.49) and 2.41 (0.78 to 4.11) respectively. However, the p-value found is 0.5301 and hence not statistically significant. Conclusion: RND is more aggressive and has been associated with greater morbidity. Hence, with similar outcomes, MRND could be an alternative salvage procedure for regional failure in selected NPC patients, allowing similar salvage rates with lesser mortality and morbidity.

**Keywords :** nasopharyngeal carcinoma, neck dissection, modified neck dissection, radical neck dissection

**Conference Title :** ICSA 2018 : International Conference on Surgery and Anesthesia

**Conference Location :** Singapore, Singapore

**Conference Dates :** March 22-23, 2018