ARC4: Morbidity Outcomes of Prophylactic Central Neck Dissection with Total Thyroidectomy versus Total Thyroidectomy alone in Patients with Node Negative Papillary Thyroid Cancer: A Meta Analysis

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OBJECTIVE: The primary objective of this meta-analysis is to provide updated information on the morbidity outcomes of prophylactic central neck dissection combined with total thyroidectomy compared to total thyroidectomy alone for node-negative papillary thyroid cancer patients.

METHOD: Two independent reviewers performed a detailed literature search using PubMed, Herdin and Cochrane Library electronic databases to assess research studies until 2018 for inclusion. The primary endpoints of locoregional recurrence, permanent hypoparathyroidism, and vocal cord paralysis were included in the assessment.

RESULTS: This meta-analysis showed that there is a significantly increased risk for permanent hypoparathyroidism in the TT combined with pCND group compared to the TT alone group, but no significant difference for vocal cord paralysis. There is also an increased risk for locoregional recurrence in the TT alone group.

CONCLUSION: This meta-analysis revealed that performing pCND in patients with node-negative PTC increases the risk of morbidity for hypoparathyroidism but not for vocal cord paralysis. More importantly, the incidence of recurrence is decreased in the pCND group, which may have implications on the overall survival of patients.

KEY WORDS: total thyroidectomy, morbidity, neck dissection, papillary thyroid carcinoma, lymph node dissection, recurrence, vocal cord paralysis, hypoparathyroidism