

Prophylactic Central neck dissection in papillary thyroid cancer: a retrospective cohort study

Background

In papillary thyroid cancer (PTC), lymph node (LN) status influences recurrence but the risk/benefit ratio of prophylactic central neck dissection (CND) is unclear. We undertook a retrospective cohort study to assess the outcome of prophylactic CND for PTC.

Methods

Over a five year period the outcome of prophylactic CND for PTC was compared with a control group of 27 patients undergoing thyroidectomy without CND for papillary or follicular thyroid cancer. Cases and controls were matched for tumour size, sex and age.

Results

25 patients underwent CND for PTC, of which 13 were performed primarily. LN metastases were present in 15/25 (60%), mean LN yield 7.7(2-29) and LN metastases 3.5(1-26).

Mean	Cases	Controls	Unpaired t-test
Day 1 post-op Ca ²⁺ (mmol/L)	1.07	1.13	P=0.08
Inpatient Stay (days)	3.1	2.6	P=0.3
Post-op Thyroglobulin (µg/L)	5.4	4.5	P=0.8

Number	Cases	Controls	Fisher's Exact
Voice Change (subjective)	8 (32%)	1	P=0.02
(temporary)	5	1	ns
(permanent)	3 (12%)	0	ns
Permanent Hypocalcaemia	3 (12%)	3	ns
Reoperation for recurrence	3	0	ns
Additional Radio-iodine Ablation	2	0	ns

Discussion

Thyroid surgery for malignancy has a greater morbidity than that for benign disease. Despite the high incidence of LN metastases in PTC the oncological benefit of prophylactic CND remains unproven. This study suggests that prophylactic CND has a particularly high risk of voice change. Caution should be used in recommending prophylactic CND in PTC until its impact on recurrence has been established.