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### Risks and benefits of prophylactic lymph node dissection during thyroidectomy for suspicious nodule

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**Introduction:** The FNA has become essential for the surgical management of thyroid nodule. When cytology indicates a possible malignancy, some teams combine a prophylactic thyroidectomy and lymphadenectomy. Up to date, the risk and benefit ratio of prophylactic lymphadenectomy has not been evaluated particularly in case of uncertain diagnosis (Bethesda score=3/4).

**Materials & Methods:** Retrospective study was conducted in 227 patients (179 women, 48 men) consecutive operated since July 2010 for a suspected thyroid nodule, isolated or dominant, and who had a preoperative ultrasound and fine needle aspiration in an expert single center. The intervention consisted of a total thyroidectomy with or without a cervical lymph node dissection (removal of at least 6 nodes). The dissection was considered prophylactic in the absence of suspicious lymph nodes identified in the preoperative ultrasound.

**Results:** FNA results were correlated by Bethesda pathological diagnosis of malignancy (B3: 23%, B4: 31%, B5: 73%, B6: 90%). Preoperative ultrasound found no adenopathy in 201 patients (88.6%), including 139 (69%) underwent a prophylactic lymphadenectomy ( $\geq 6$  nodes). In this case, the median number of lymph nodes removed was 14 (IQR=9 to 19). Lymph node involvement was found in 0/14 patients B3 (0%), 0/72 B4 patients (0%), 8/72 patients B5 (11%) and 10/42 patients B6 (24%). The overall rate of postoperative complications (hypocalcemia, laryngoscopy abnormal, cervical hematoma, surgical site infection) was 49% in cases of prophylactic dissection and 28% in the absence of dissection ( $p=0.001$ , Chi 2). Performing dissection significantly increased length of hospital stay ( $1.5\pm 1.0$  vs.  $2.2\pm 2.0$  days,  $p<0.001$ ). In multivariate analysis, the implementation of prophylactic lymphadenectomy increased the risk of complications by 47% (OR 2.033, 95% CI: 1.003 to 4.118,  $p=0.049$ ), regardless of tumor size ( $p=0.81$ ).

**Conclusion:** 1. During a thyroidectomy for suspicious nodule, prophylactic lymphadenectomy increases postoperative morbidity of 47% and lengthens hospitalization. 2. Role of prophylactic lymph node dissection seems to be questionable when Bethesda's score is less than 5 regardless of tumor size.

#### Biography

Mohammed Ghunaim is the Chairman of General Surgery, Bariatric and Endocrine Surgery at the University Hospital of Lille, France. He is Professor since 2004. He has published more than 50 papers in reputed journals and has been serving as an Editorial Board Member of reputed.

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