The prevalence and predictors of coexisting thyroid malignancy in toxic multinodular goiter – a 17-year retrospective study by an East Coast Malaysian centre for endocrine surgery

Husna Harun, Junaidi Awang Isa, Wan Suriza Wan Abdul Rahman, Siti Salwa Mohamad Shokri, Imi Sairi Ab Hadi

Surgical Department, Hospital Raja Perempuan Zainab II, Kota Bharu, 8000, Kelantan

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ABSTRACT

Introduction: East coast Malaysia especially Kelantan is known for an endemic goiter disease in which multinodular goiter (MNG) was around 70% and up to 1/4 were toxic. Iodine deficiency is addressed as the biggest contributing factor towards the disease. The incidence of thyroid malignancy in toxic MNG was believed to be lower formerly but a few recent studies suggested that the incidence was increasing in trend. **Materials and Methods:** A retrospective review was conducted. Patients who underwent surgery for Toxic MNG from January 2007 until June 2024 were included however recurrent diseases, completion surgery and history of irradiation were excluded. The univariate and multivariate analyses were performed to identify predictors of malignancy. **Results:** Total of 1269 patients had undergone thyroid surgery for goiter and 261 patients were found to be toxic MNG (20.6%). Incidence of malignancy in toxic MNG was 18.6% which was comparable to non-toxic MNG around 20.2%. The most common malignancy among toxic MNG patients were papillary thyroid carcinoma (95.3%). No significant predictors of malignancy were found on statistical analysis. **Conclusion:** Even while thyroid stimulating hormone (TSH) is suppressed; patients with toxic MNG have a quite high prevalence of incidental thyroid cancer. No obvious predicting factors was identified. For individuals with toxic MNG, total thyroidectomy ought to be the recommended surgical procedure given the incidence of coexisting malignancy.

Keywords: Thyroid, multinodular, toxic, carcinoma, surgery