Relation between the size and incidence of malignancy in solitary thyroid nodule

Background: The thyroid nodule is a common entity, while autopsy data indicate a 50% prevalence of thyroid nodules larger than one centimeter in patients without clinical evidence of thyroid disease, the prevalence of palpable nodules is only 4 to 7%. Thyroid nodules warrant removal when they are large enough to be symptomatic ,or if there is a concern for malignancy ,the majority of nodules are asymptomatic ,and with only 5 to 10% of nodules being malignant , the decision to operate is made on therapeutic or diagnostic grounds. **Objective:** This study aims to discuss the relation between the size and the incidence of malignancy in the solitary thyroid nodule. **Methods:** This is a prospective study including 25 female patients admitted to our hospital (Fayoum university hospital) for surgical treatment of solitary thyroid nodule. The study started from the 1st of August 2018 to the 1st of November 2018. The study was approved by the medical ethics committee of the Faculty of Medicine, Fayoum University. **Results:** Our study included 25 female patients who were operated for clinically detected STN, divided according to the size of the nodule into three groups with correlation between the size of the nodule and the incidence of malignancy. The results of the studied sample showed the following: Group A: the nodule size was less than 2cm: including 2 patients (8%). and both were benign, with incidence of malignancy zero. Group B: the nodule size 2-4 cm: included 20 patients (80%). 17 patients were benign, and 3 patients were malignant, with incidence of malignancy (15%) Group C: the nodule size was more than 4cm: included 3 patients (12%), two patients were benign, and one was malignant, with incidence of malignancy (33%). **Conclusion:** These contradictory results show that the size of the nodule is not reliable at predicting malignancy and should not be applied for medical decision making.