

ABSTRACT

Thyroid masses are common surgical presentations with a worldwide prevalence of 4–7% in the general adult population. Africa, specifically Kenya is not excluded from these surgical conditions. The vast majority of adult thyroid nodules are benign neoplasm's, however, less than 10% are malignant, which makes it important to screen the nodules in order to offer appropriate surgery and avoid unnecessary surgery for benign nodules. It is preferred to operate only on those patients with suspicion of malignancy, while strict patient follow-up is necessary in dealing with benign cases. Fine needle aspiration cytology (FNAC) is known to play a pivotal role in the screening and management of thyroid swellings. FNAC is done in an increasing number of patients presenting with thyroid masses at the Moi Teaching and Referral Hospital, however its findings are yet to be incorporated into the management and planning of these masses. The aim of this study was to assess the diagnostic accuracy of FNAC in evaluating thyroid nodules at the Moi Teaching and Referral Hospital in order to establish a basis of whether or not to incorporate its findings in the management of these masses pre-operatively. This was a retrospective study where FNAC and corresponding histological evaluation findings of 118 patients aged 17-88 years who had a pre-operative FNAC and subsequently a thyroid resection for definitive histological diagnosis between January 2007 and December 2014 were randomly sampled and accessed from the archives of MTRH and compared for concordance and discordance. Of the 118 FNAC, 17 (14.40%) were inadequate to make a diagnosis, 14(11.86%) were suspicious for malignancy, and 78 (66.1%) were benign while 9 (7.62%) were malignant. The benign cases consisted predominantly of colloid goiter (54.54%) whereas the malignant ones consisted predominantly of papillary carcinomas (5.08%). The concordance, false positive and false negative rates were 90.80%, 3.44% and 5.74% respectively. The accuracy, sensitivity, specificity, positive predictive value and negative predictive values of FNAC were 90.80%, 54.54%, 96.05%, 66.66% and 94.58% respectively. There was a significant agreement between the two tests ($p= 0.34$). FNAC of thyroid is accurate and has a low rate of false-negatives and false-positives diagnoses hence can be adopted and relied upon in evaluating thyroid nodules pre-operatively. Use of FNAC reduces the rate of unnecessary surgeries, the cost of health care and the risks associated with surgeries, resulting in better outcome of patients care