

Malignancy Rates of Bethesda System for Reporting Thyroid Cytopathology in Single Surgical Unit

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Introduction. The Bethesda System for Reporting Thyroid Cytopathology (TBSRTC) is a fairly new classification method of thyroid fine-needle aspiration (FNA) results that has been proven useful in facilitating communication among specialists. However, the obtained malignancy rates often vary between facilities and TBSRTC.

Aim, Materials and Methods. The aim of the study is to assess the malignancy rates of all TBSRTC classes and the frequency of “excluding malignancy” as the main surgical indication within benign histological diagnoses, in a single surgical unit. Retrospective analysis was done on 328 thyroid operation cases over a period of 16 months. Distributions of cytological and histological main diagnoses were quantified, the malignancy rates of each category and the prevalence of the indication “excluding malignancy” within benign histological diagnoses were assessed. Statistical analysis was performed using IBM SPSS Statistics software.

Results. Out of the 328 cases, 291 were female and 37 male. Age range was 21–81 years (mean \pm SD, 52 \pm 13 years). FNA cytology analysis was performed in 223 cases. At the time, main histological diagnosis was available for 204 cases, out of which 74 (36.3%) were primarily malignant and 130 (63.7%) were benign. Further analysis was done in cases with both FNA and histological diagnosis. 23 (11.3%) of the FNA samples were nondiagnostic (Bethesda I – BI), 84 (41.2%) – benign (BII), 33 (16.2%) – atypia of undetermined significance (BIII), 21 (10.3%) – suspicious for a follicular neoplasm (BIV), 24 (11.8%) – suspicious of malignancy (BV) and 19 (9.3%) – malignant (BVI). The malignancy rates after excluding 7 microcarcinomas in the benign category (BII), which did not have “excluding malignancy” as the main indication for surgery, were as follows: BI – 3/23 (13.0%), BII – 5/77 (6.5%), BIII – 11/33 (33.3%), BIV – 8/21 (38.1%), BV – 21/24 (87.5%), BVI – 19/19 (100%). Within the 204 FNA cases, the frequency of “excluding malignancy” as the main surgical indication for benign histological diagnoses was 47/130 (36.2%), out of which 22/130 (16.9%) were in the benign class (BII).

Conclusions. The malignancy rates of all FNA categories (BI, II, III, IV, V) did not coincide with those implied by TBSRTC, even after excluding 7 microcarcinomas in the benign category. 36.2% of benign histological diagnoses had “excluding malignancy” as the main indication for surgery, posing a question whether a more effective means of assessing risk for thyroid malignancy is necessary.