INTRAOPERATIVE CYTOLOGICAL EVALUATION FOR GUIDING SURGICAL TREATMENT OF TIR 3/TIR 4 THYROID FINE NEEDLE ASPIRATION CASES

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Background/Introduction. Thyroid Fine Needle Aspiration (FNA) is the most effective tool for guiding the initial management of patients with thyroid nodules. Thyroid Fine Needle Aspiration is accurate, safe, efficient and cost-effective. Unfortunately, a few cases are suspicious but non-diagnostic of malignancy (Tir 4 in the 5-tiered SIAPEC-IAP reporting system), most of these are papillary carcinomas (PTC). Confirmation of malignancy for guiding the best surgical treatment is advisable.

Aims. To verify the impact of intraoperative cytological evaluation, with or without histological frozen section, on diagnosis of malignancy in selected cases.

Materials and methods. We reviewed our intraoperative diagnosis of thyroid nodules in the last year. All cases were papillary carcinomas at definitive histological diagnosis. We performed the intraoperative cytological evaluation of 1 “indeterminate” case (Tir 3) and 7 “suspicious of papillary carcinoma” cases (Tir 4). Touch and/or scrape preps were made of the cut surface of the nodule. In 7 out of 8 cases also we performed intraoperative histological frozen section. Fast Hematoxilin-Eosin stain was used for all of the specimens.

Results. At intraoperative citological evaluation, classic nuclei of papillary thyroid carcinoma were seen in 5 out of 6 cases; nuclear atypia was not enough to suggest papillary carcinoma in 1 case, previously classified as Tir 3. At intraoperative histological evaluation, features of papillary carcinoma were seen in 6 out of 7 cases; nuclear atypia was not enough to suggest papillary carcinoma in 1 case, previously classified as Tir 4.

Conclusions. Intraoperative citological evaluation of selected cases is a useful, simple and very cost-effective method for directing surgical treatment.

References.