

## COMPARISON BETWEEN FINE NEEDLE ASPIRATION CYTOLOGY AND THYROID USG ON SINGLE THYROID NODULE

**Chairun Nur Prasetya\*, Maryono Dwi Wibowo\*\***

\*Surgery Department , Faculty of Medicine, Universitas Airlangga - Dr. Soetomo Hospital, Surabaya

\*\*Head and Neck Surgery Division, Surgery Department , Faculty of Medicine, Universitas Airlangga - Dr. Soetomo Hospital, Surabaya

### **ABSTRACT**

**Background:** Fine needle aspiration cytology (FNAC) has been widely used for thyroid nodule examination preoperatively. Not every hospitals in Indonesia have facilities and anatomical pathologists to interpret the cytologic preparations of FNAC. Thyroid ultrasound can be used as a diagnostic on a single thyroid nodule especially in peripheral hospitals.

**Objectives:** To compare the accuracy, sensitivity, specificity, positive predictive value and negative predictive value using thyroid ultrasound and FNAC.

**Method:** From October to December 2017, both thyroid ultrasound and FNAC were carried out from 24 consecutive patient with single thyroid nodule admitted to the Head and Neck section, Department of Surgery, Dr Soetomo Hospital. The result of thyroid ultrasound and FNAC examinations were compared with histopathologic diagnosis.

**Results:** In our study, sensitivity, specificity, positive predictive value, negative predictive value and accuracy for thyroid ultrasound and FNAC were 85.71 %, 100 %, 100 %, 94.4 %, and 95.8 %. Both thyroid ultrasound and FNAC missed the diagnose of papillary carcinoma in one patient. Overall cancer rate among 24 patients was 25 % ( six papillary carcinoma and one follicular carcinoma).

**Conclusion:** The sensitivity, specificity, positive predictive value, negative predictive value and accuracy of thyroid ultrasound examination and FNAC have the same value. It can be concluded that thyroid ultrasound examination can be used as a diagnostic alternative to a single thyroid nodule.

*Keywords:* Thyroid, thyroid ultrasound, FNAC, histopathology