

## **A STUDY ON IMMUNO HISTOCHEMICAL ANALYSIS OF CD56 AND GALECTIN-3 EXPRESSION IN FOLLICULAR NEOPLASMS OF THYROID**

### **Abstract**

#### **Background:**

Follicular neoplasm of thyroid comprises of both benign and malignant follicular tumors. The important feature which differentiates follicular adenoma and follicular thyroid carcinoma (particularly minimally invasive follicular carcinoma) is unequivocal capsular and / or vascular invasion. But identification of this feature in histopathology is very challenging due to sectioning and technical artifacts. In this view increasing numbers of immunohistochemical markers are in the process of evaluation. The aim of this study to predict the diagnostic accuracy of CD56 AND GALECTIN 3 markers, as well as their combination in the differentiation of benign and malignant follicular thyroid tumors.

#### **Methods:**

In this study immunohistochemical expression of CD56 and GALECTIN 3 were studied in both follicular adenomas and follicular carcinomas. The study was conducted on the blocks retrieved from the pathology department at Tirunelveli Medical College, diagnosed between 2014 and 2017 and included totally 45 cases. Out of them 33 cases were benign tumors (follicular adenoma), 12 cases were malignant tumors (follicular carcinoma).

#### **Results:**

In this study CD56 expression was higher in follicular adenomas (96.6%) and expression of Galectin 3 was higher in follicular carcinomas (83.3%). And combination of these two markers differentiated benign and malignant follicular tumors with statistical significant difference (p value < 0.0001) and increased specificity for malignancy.

**Conclusion:**

Galectin 3 is a sensitive marker for malignancy, while loss of expression of CD56 is very specific for malignancy. Combination of these two markers increases specificity for malignancy.

**Keywords:**

Thyroid, Immunohistochemistry ,CD56, GALECTIN 3