

Research Article

The presence of Lymphocytes in the FNAC of thyroid swelling: Straight forward case of lymphocytic thyroiditis or diagnostic dilemma

Dr Satish Arakeri¹, Dr Geethavasu²

¹Assistant professor, ²Professor and HOD, Department of Pathology, DMWIMS, Naseera nagar, meppadi, Wayand-673577, Kerala, India

***Corresponding author**

Dr Satish Arakeri

Email: drsatissharakeri@gmail.com

Abstract: The aim of the study is to assess the presence of lymphocytes in nodular goitre and its diagnostic dilemma in FNAC. Materials and methods: Total 60 thyroid biopsy cases have been examined. Results and discussion: Out of 60 cases, 23 cases show lymphocytic infiltration. The presence of lymphocytes is not the feature of nodular goitre but its association with nodular goitre creates diagnostic dilemma in FNAC as lymphocytic thyroiditis. Conclusion: As 1/3rd cases of nodular goitre show the presence of lymphocytic infiltration, the FNAC findings have to be correlated with the type of thyroid swelling in arriving the diagnosis.

Keywords: FNAC, thyroid, lymphocytes, nodular goiter

INTRODUCTION

FNAC is the first line investigation for any thyroid swelling. The FNAC has a very high sensitivity in diagnosing the lesions of thyroid, for that matter, FNAC is the only tissue diagnostic test available for thyroid swelling. Similar to all the investigations, FNAC also has some misleading findings which lead to confusion in arriving the diagnosis. The aim of the present study is to assess the presence of lymphocytes in nodular goitre, which normally should not be there. The presence of lymphocytes confuses the diagnosis with lymphocytic thyroiditis on FNAC [1].

MATERIALS AND METHODS

Total 60 biopsies of thyroid (total thyroidectomy) have been examined. Minimum 3 representative tissue bits in each case has been examined thoroughly. All these cases are diagnosed as nodular goitre on biopsy. All these cases are examined for the presence of lymphocytes in the interstitium without any Hurthle cell metaplasia. The criteria for the diagnosis are as mentioned below.

Criteria for diagnosis of nodular goitre on biopsy [6, 7] On gross examination, multiple colloid nodules present. Under microscope, multiple nodules of

varying sizes separated by fibro vascular septae. Each nodule is composed of both dilated and normal follicles filled with colloid [1, 2, 3].

Criteria for diagnosis of lymphocytic thyroiditis on biopsy [6, 7]. On gross examination, diffuse homogenously enlarged thyroid gland, meaty appearance. Under microscope, both normal and ruptured thyroid follicles present with infiltration of lymphocytes and formation of lymphoid follicles. There is evidence of Hurthle cell metaplasia. The presence of Hurthle cell suggests the diagnosis of Hashimoto thyroiditis. But the confirmatory test is always the presence of anti-thyroid antibodies [1]. So, on biopsy findings, the diagnosis of Hashimoto thyroiditis cannot be given, it is only the biochemical test i.e. anti-thyroid. So, the diagnosis of lymphocytic thyroiditis is the apt diagnosis given in such cases [2, 3].

RESULTS AND DISCUSSION

In the present study, total 60 cases of nodular goitre have been examined. All of them show multiple nodules of varying sizes separated by fibro vascular septae. Each nodule is composed of both dilated and normal follicles filled with colloid.

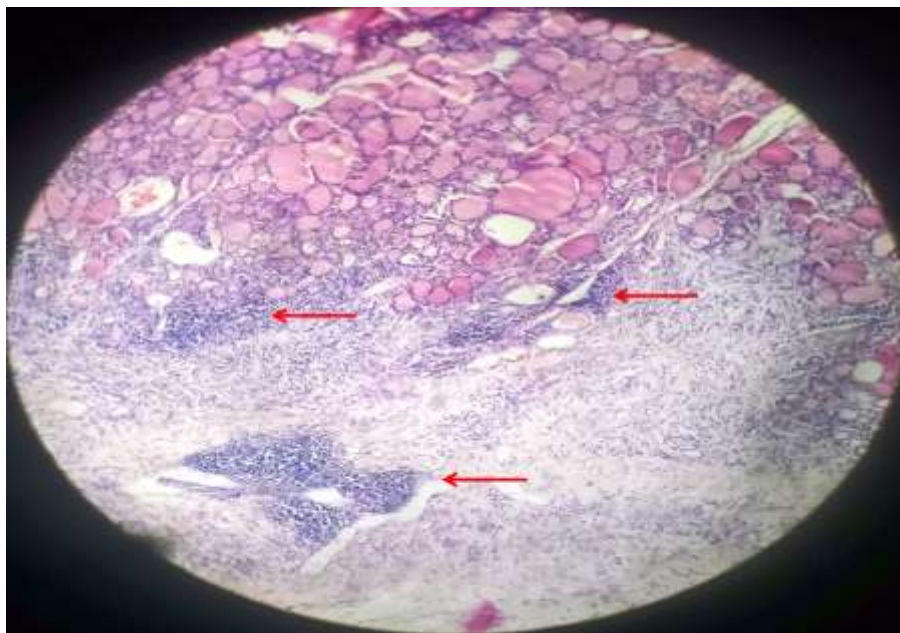


Fig-1: Section studied shows both dilated and normal follicles filled with colloid. Note the infiltration of lymphocytes in aggregates (arrow).

The aim of the present study is to see the presence of lymphocytes in the interstitium. So out of 60 cases, 23 cases show the presence of significant number of lymphocytes in the interstitium. The presence of lymphocytes is not the feature of nodular goitre but its association with nodular goitre creates diagnostic dilemma in FNAC. These lymphocytes in the interstitium can be aspirated in the FNAC and confuses with the diagnosis of lymphocytic thyroiditis [4, 5]. Hence in any case, where there are plenty of lymphocytes seen in the FNAC, one has to think twice in giving the diagnosis of lymphocytic thyroiditis. One has to examine the thyroid whether it is solitary or multinodular swelling as well as cross check the ultrasound findings of thyroid for the type of swelling, then correlate FNAC findings with clinical presentation/ultrasound findings and give the FNAC diagnosis in such cases. The reason for the lymphocytic infiltration has yet to be evaluated in the future study [2, 3].

CONCLUSION

The presence of lymphocytes in the FNAC should not be considered as lymphocytic thyroiditis. As 1/3rd cases of nodular goitre also show the presence of lymphocytic infiltration [4, 5]. The FNAC finding has to be correlated with the type of thyroid swelling in arriving the diagnosis.

REFERENCES

1. Guhamallick M, Sengupta S, Bhattacharya NK, Basu N, Roy S, Ghosh AK *et al.*; Cytodiagnosis of thyroid lesions-usefulness and pitfalls: A study of 288 cases. *Journal of cytology*. 2008; 25(1):6-9.

2. Haberal AN, Toru S, Ozen O, Arat Z, Bilezikci B; Diagnostic pitfalls in the evaluation of fine needle aspiration cytology of the thyroid: correlation with histopathology in 260 cases. *Cytopathology* .2009; 20:103–108.
3. Alaa MA, Jing L, Al-Khafaji BM; Cytologic Artifacts and Pitfalls of Thyroid Fine-Needle Aspiration Using Thin Prep. A Comparative Retrospective Review. *Cancer cytopathology*. 2001; 93:179–186.
4. Bommanahalli BP, Bhat RV, Rupanarayan R; A cell pattern approach to interpretation of fine needle aspiration cytology of thyroid lesions: A cyto-histomorphological study. *J Cytol*. 2010; 27(4): 127–132.
5. Weetman AP; Autoimmune Thyroid Disease. *Autoimmunity*. 2004 ; 37 (4):337–340
6. Siegel RD, Lee SL; Toxic nodular goiter: Toxic Adenoma and Toxic Multinodular Goiter *Endocrinol Metab Clin North Am* 1998; 27(1):151-68.
7. Mavilia C, Vallin E, Frediani U, Rotella CM, Toccafondi R; Intrathyroidal lymphocytes from non toxic multinodular goiter: no evidence for production of thyroid stimulating antibodies. *Autoimmunity*. 1990; 6(4):239-48.