

3 cases, follicular adenoma in 4 cases, hashimoto's thyroiditis in one case.

E Ghosal B Paul et al, analysed 75 patients with solitary nodule accurate correlation of FNAC HPE and report was possible only in 55 cases [22]. In our study among 15 solitary nodular goitres FNAC and HPE report correlation was possible only in 13 cases.

In a study done by Safirullah et al. it was reported the accuracy of FNAC as 94.2%, and another study done by Mundasad et al. and Gupta et al. the accuracy was 80% and 85% respectively [23-31]. In our study the accuracy of FNAC in detection of the thyroid swelling was found to be 80%.

CONCLUSION

In our study the commonest thyroid disease affecting study population are solitary nodular goitre, multinodular goitre, hashimoto's, papillary carcinoma thyroid. Incidence of carcinoma in solitary nodular goitre 6.66%.

FNAC is simple, safe, and cost effective but HPE remains final diagnostic tool. Because FNAC cannot differentiate between adenoma and carcinoma in follicular and hurtle cell lesions. The suspicious results in FNAC prove to be an area of uncertainty often resolved by diagnostic surgical resection. In case of Multinodular goitre even if the preoperative FNAC is negative it does not exclude with certainty the possibility of a carcinoma because the error in sampling the right area is greater. Such evaluation may lead to non-radical operation and the need of a second surgery or radio therapy.

FUNDING

No funding sources.

ETHICAL APPROVAL

The study was approved by the Institutional Ethics Committee.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

ACKNOWLEDGMENTS

The encouragement and support from Bharath University, Chennai is gratefully acknowledged. For provided the laboratory facilities to carry out the research work.

REFERENCES

1. <https://www.routledge.com/Bailey--Loves-Short-Practice-of-Surgery-27th-Edition/Williams-OConnell-McCaskie/p/book/9781498796507>
2. <http://med-mu.com/wp-content/uploads/2018/07/Schwartzs-Principles-of-Surgery-10th-Ed-PDF-No-Watermarktahir99-VRG.pdf>
3. <https://www.us.elsevierhealth.com/sabiston-textbook-of-surgery-9780323299879.html>
4. <https://www.elsevier.com/books/robbins-and-cotran-review-of-pathology/klatt/978-1-4557-5155-6>
5. <https://uotechnology.edu.iq/dep/bme/english/Pages/Lectures/anatomy%20first%20course/Grant's%20Atlas%20of%20Anatomy.pdf>
6. <https://www.worldcat.org/title/fischers-mastery-of-surgery/oclc/809260929>
7. Oertel YC. Fine-needle aspiration of the thyroid: technique and terminology. *Endocrinol Metabolism Clin North Am* 2007; 36:737-51.
8. Gharib H, Papini E. Thyroid nodules: clinical importance, assessment, and treatment. *Endocrinol Metabol Clin North Am* 2007; 36:707-35.
9. AACE/AME. Task force on thyroid nodules American association of clinical endocrinologists and association Medici endocrinology medical guidelines for clinical practice for the diagnosis and management of thyroid nodules: *Endocr Pract* 2006; 12:63-102.
10. Welker MJ, Orlov D. Thyroid nodules. *Am Family Physician* 2003; 67:559-66.
11. Feld S. AACE clinical practice guidelines for the diagnosis and management of thyroid nodules. *American Association of Clinical Endocrinologists*; 1999.
12. Raghiveer pedamallu, Pedamallu SB, Rama Rao K. Pedamallu incidence of occult cancer in MNG using HPE findings internet. *J Surg* 2008; 17.
13. <https://1library.net/document/4yrk6doz-comparison-fine-needle-aspiration-cytology-histopathology-thyroid-disease.html>
14. Koh KB, Chang KW. Carcinoma in multinodular goitre. *J Br Surg* 1992; 79:266-7.
15. Mundasad B, Mcallister I, Pyper P, et al. Accuracy of fine needle aspiration cytology in diagnosis of thyroid swellings. *Cytopathology Supplement* 2003; 14.
16. Caraway NP, Sneige N, Samaan NA. Diagnostic pitfalls in thyroid fine-needle aspiration: A review of 394 cases. *Diagnostic Cytopathol* 1993; 9:345-50.
17. https://journals.lww.com/intjgynpathology/Fulltext/2006/07000/Fine_Needle_Aspiration_Cytology_4th_Edition.19.aspx
18. Psarras A, Papadopoulos SN, Livadas D, et al. The single thyroid nodule. *J Br Surg* 1972; 59:545-548.
19. Kopald KH, Layfield LJ, Mohrmann R, et al. Clarifying the role of fine-needle aspiration cytologic evaluation and frozen section examination in the operative management of thyroid cancer. *Archives Surg* 1989; 124:1201-5.
20. Fenn AS, Krishnan KV, Devadatta J, et al. Solitary nodules of thyroid gland review of 342 cases. *Indian J Surg* 1980; 40:175-7.
21. Suryaprakash Rao, Ramaskrishna DV. An analysis of 100 cases of thyroid disease-ASI Conference 1990.

22. Ghosal B, Paul NC, Majundas PM. FNAC in diagnosis of thyroid nodules correlation with HPE report and application in thyroid surgery. *Indian J Surg* 1984; 16:76-83.
23. Balakrishnan R. A follow up study by fine needle aspiration cytology in solitary nodular goitre in GVMCH (Doctoral dissertation, Government Vellore Medical College, Vellore).
24. Johnson CD, Taylor I. Recent Advances in surgery. 13-159-173.
25. Agarwal S. Diagnostic accuracy and role of fine needle aspiration cytology in management of thyroid nodules. *J Surg Oncol* 1995; 58:168-172.
26. Rojeski MT, Gharib H. Nodular thyroid disease. Evaluation and management. *New Eng J Med* 1985; 313:428-436.
27. Asotra S, Sharma J. Role of AgNORs in thyroid lesions on FNAC smears. *J Cytol* 2008; 25:18-22.
28. Layfield LJ, Cibas ES, Gharib H, et al. Thyroid aspiration cytology: Current status. *Cancer J Clin* 2009; 59:99-110.
29. Guhamallick M, Sengupta S, Bhattacharya NK, et al. Cytodiagnosis of thyroid lesions-usefulness and pitfalls: A study of 288 cases. *J Cytol* 2008; 25:6-9.
30. Mundasad B, Callisier I, Carson Pyper P. Accuracy of fine needle aspiration cytology in the diagnosis of thyroid swelling. *Int J Endocrinol* 2006; 2:20-25.
31. Saleh AF, AJ NR, Salam MA, et al. Role of fine needle aspiration cytology (FNAC) in the diagnosis of prostatic lesions with histologic correlation. *Bangladesh Med Res Council Bulletin* 2005; 31:95-103.