CASE REPORT

THYROID EPIDERMAL CYST – A COMMON CYST, RARE SITE

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ABSTRACT

Cystic lesions are quite common in thyroid gland. A wide spectrum encompassing developmental, degenerative non-neoplastic, inclusion and neoplastic etiology have to be considered. The cystic lesions occur ubiquitously in any age with no particular sex predilection. The cystic lesions include colloid cysts, papillary carcinoma, thyroglossal cysts and very rarely epidermal cyst. Epidermal inclusion cyst is a slow growing cyst. The diagnosis can be made on cytology with accuracy. Treatment is surgical excision. We report a rare case of inclusion epidermal cyst diagnosed on cytology and confirmed by histopathology.

Keywords: Thyroid gland, Cyst, Epidermal, Cytology

INTRODUCTION

Thyroid lesions are one of the common conditions encountered in clinical practice but are amenable to medical or surgical treatment.[1] Presence of swelling causes much anxiety and cosmetic embarrassment, especially for females who are affected more than males. As all palpable lesions can be assessed by FNAC technique, early diagnosis is often possible. But the perspective of aspiration cytology is to be regarded complementary and not a substitute for histopathology.[2] The BETHESDA system of reporting for thyroid cytopathology has served useful in bridging discrepancy, bringing uniformity between pathologists and clinicians.[3] The surgically amenable cystic thyroid gland lesions range from developmental cysts due to brachial cleft anomalies i.e. thyroglossal cyst, cystic change in goitres and malignancy is well known. Rarely, epidermal cyst can be seen in thyroid gland. These are thought to arise from foci of squamous metaplasia.[4] We here report such a rare case of epidermal cyst in thyroid gland.

CASE REPORT

A 26 year old female complained of anterior neck mass since 6 months. The solitary painless, firm mass was 2x2 cm and moved with deglutition. There was no lymphadenopathy. The patient was euthyroid. A clinical diagnosis of nodular colloid goitre was made. However on cytology, aspirate was dirty, greyish white. Microscopy revealed many nucleate and anucleate squamous cells against clear background. There was no evidence of respiratory type of epithelial cells, dense polymorphous lymphoid cells. According to the BETHESDA system, the case was reported as benign category with a possibility of epidermal inclusion cyst. Hemithyroidectomy was carried out. Grossly, a cyst measuring 3x3 cm, containing greyish white material was seen. Rest of the thyroid gland was unremarkable. Histopathology showed a cyst lined by stratified squamous lining, at places showed attenuation. Keratin flakes were also seen. Beneath the cyst, a zone of fibrosis with lymphocytic sprinkling with adjacent unremarkable thyroid. A final diagnosis of epidermal inclusion cyst was given.

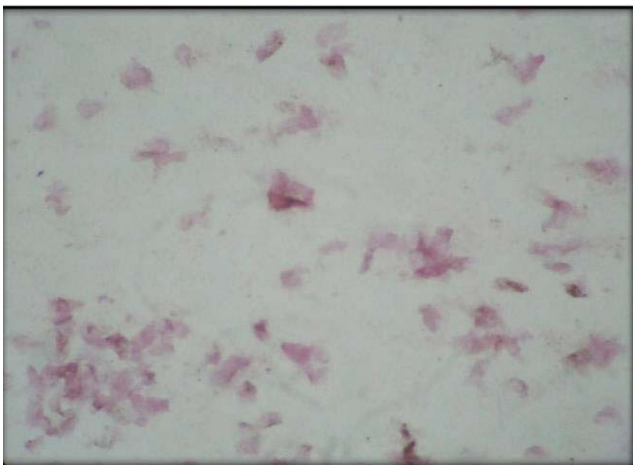

Figure 1: Photomicrograph of Keratinous Cyst showing anucleate and few nucleate squamous cells against clear background. FNAC (H&E, 400x)

Figure 2: Photomicrograph of Keratinous Cyst showing cyst wall lined by squamous epithelium with underlying fibrous layer and thyroid follicles. Tissue section (H&E, 40x) Inset: Keratinous Cyst wall. Tissue section (H&E, 100x)

DISCUSSION

Epidermoid cysts of the thyroid gland are rare lesions with only 8 cases reported in the literature. The age range was 4 to 60 years with a mean of 42 years with no sex predilection. The sizes of the cysts were in the range of 1.1 to 4.4 cm.[5] On cytologic smears, there were many mature superficial squamous cells with intact nuclei, anucleate squames, clusters of neutrophils and lymphocytes, macrophages, and in the background, amorphous debris.[6] Epidermoid cysts are unilocular and well circumscribed. They are lined by squamous epithelium and surrounded by a fibrous layer, which might contain smooth muscle fibers.[6] Squamous cells are not a component of the normal thyroid gland, but they may be seen in a variety of thyroid lesions such as benign metaplasia, neoplasms, and congenital remnants such as thymic rests, thyroglossal duct remnants, and brachial cleft cysts.

The treatment includes surgical excision. There are no evidence of recurrence.[7]

REFERENCES

1. Mitra A, Abbas AK. The endocrine system.In: Robbins and Cotran Pathologic Basis of Disease, 8th edn. Kumar V, Abbas AK, Fausto N, Aster JC (eds). Philadelphia: Saunders 2010:1097- 1164.
2. Handa U, Garg S, Mohan H, Nagarkar N. Role of Fine Needle aspiration cytology in diagnosis and management of thyroid lesions; A study of 434 cases. Journal of cytology 2008; 25: 13-16.
3. Edmund S. Cibas, MD, Syed Z. Ali, MD.The Bethesda System for Reporting Thyroid Cytopathology Am J Clin Pathol 2009;132:658-665
4. Yilmaz M, Haciyev Y, Mamanov M, Cansiz H, Yilmaz R. Epidermal inclusion cyst of the larynx. J Craniofac Surg 2011; 22: 1-2.
5. Woseneneh Bekele, MD, Eugenio O. Gerscovich, MD, Sima Naderi, MD, John Bishop, MD, Regina F. Gandour-Edwards, MD and John P. McGahan, MD; Sonography of an Epidermoid Inclusion Cyst of the Thyroid Gland; *JUM* January 1, 2012 vol. 31 no. 1 128-129
6. Chen KTK . Fine-needle aspiration cytology of epidermoid cyst of the thyroid: report of a case and review of seven cases. Diagn Cytopathol 2007; 35:123–124.
7. Ozan Kuduban. Epidermal Inclusion Cyst of Thyroid Gland. The Eurasian Journal of Medicine 2014; 47(1):78