

# FNAC Diagnosis of Ceruminous Adenoma of External Auditory Canal with Histopathological Correlation

Anita A Mahanta, Sainath K Andola

Department of Pathology, Mahadevappa Rampure Medical College, Gulbarga

(Received: November, 2014)

(Accepted: December, 2014)

## ABSTRACT

Ceruminous adenoma is rare benign neoplasm of the external auditory meatus. They demonstrate dual cell population of basal myoepithelial cells and luminal ceruminous cells. Complete excision has excellent prognosis. We report two cases of ceruminous adenoma presented with mass and conductive hearing loss, diagnosed on FNAC and confirmed by histopathology with a brief review of literature.

**KEY WORDS:** ceruminous adenoma, cerumin pigment, external auditory canal, pleomorphic adenoma-ear.

## INTRODUCTION:

Primary neoplasms of external auditory canal are rare with benign clinical behaviour.<sup>[1]</sup> Ceruminous gland tumors arise in the external auditory canal from specialised glands that are closely related to apocrine glands which contribute material that combines sebaceous gland products and desquamated epithelial cells to produce a waxy substance known as cerumin.<sup>[2]</sup> Ceruminous adenomas account for less than 1% of all external ear tumours.<sup>[3]</sup>

## CASE 1:

A 85 year male presented with conductive hearing and swelling in the left external auditory canal. On examination it was a pedunculated mass, firm, painless measuring 2x2 cm. FNAC was done and the diagnosis of benign neoplasm with possibility of ceruminous adenoma showed round to oval cells with bland nuclei and myxoid material. Excision of the mass revealed skin covered globular mass measuring 2x2cm. Cut surface showed solid grey white with myxoid areas. Microscopy shows an encapsulated tumour beneath

epidermis composed of dilated glands, at places tumour cells were arranged in sheets and nests with fibrosis. Occasional papillary areas along with myxoid and pseudocartilagenous areas were seen. The tumour cells were arranged in double layer with outer myoepithelial cells and inner luminal columnar secretory cells with granular cytoplasm. The granules were golden yellow brown, which were PAS and AFB positive. The diagnosis of ceruminous pleomorphic adenoma was established.

## CASE 2:

A 30 year female presented with swelling in right external ear since 6 years with pain and tinnitus. On examination it was a 2x2cm firm tender mass occluding external auditory canal. FNAC revealed uniform round to oval cells arranged in glandular pattern. Also seen was metachromatic material suggestive of ceruminous adenoma. Excision of the mass revealed an encapsulated well circumscribed tumour composed of cells arranged in glandular pattern with double layer. PAS and AFB were positive. The diagnosis was ceruminous adenoma.

-----  
**Corresponding Author: Dr. Anita A Mahanta**, Associate Professor, Department of Pathology, MR Medical College, Gulbarga  
**Phone No.:** +91 9945278500  
**E-mail:** dranitaam@gmail.com

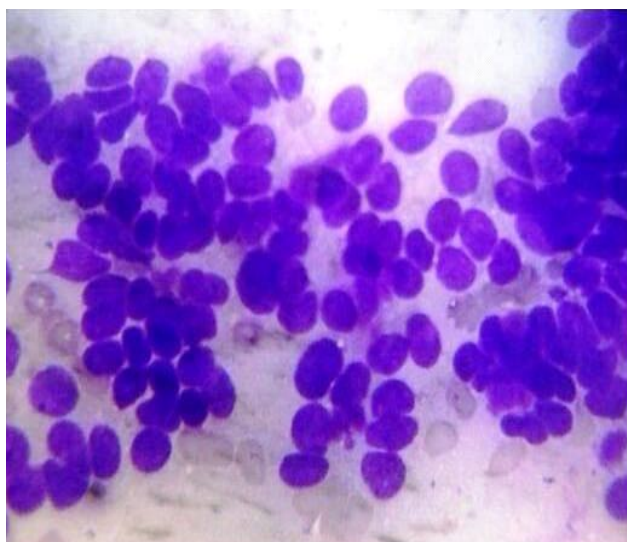
## DISCUSSION:

Ceruminous adenoma occur with equal frequency in men and women with age range of

12-85 years.<sup>[4]</sup> Usually the patient present with conductive hearing loss, nerve changes (tinnitus paralysis) ,aural discharge, earache and rarely bleeding.<sup>[5]</sup> Pain and facial nerve palsy are clinical predictors of malignancy. However pain can be encountered in both benign and malignant ceruminous neoplasm.<sup>[4]</sup>

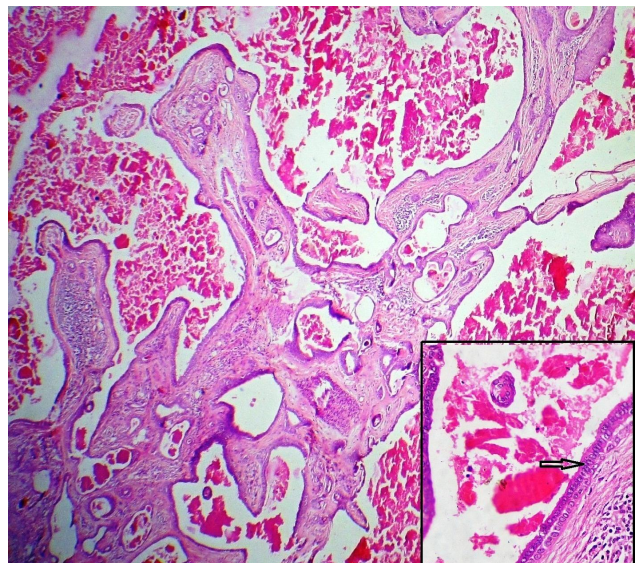
**Table 1:** Nomenclature for ceruminous neoplasms of external auditory canal.

Benign neoplasm	Malignant neoplasm
Ceruminous adenoma	Ceruminous adenocarcinoma
Ceruminous pleomorphic adenoma	Ceruminous adenoid cystic carcinoma
Ceruminous syringocystadenomacpapilliferum	Ceruminous mucoepidermoid carcinoma

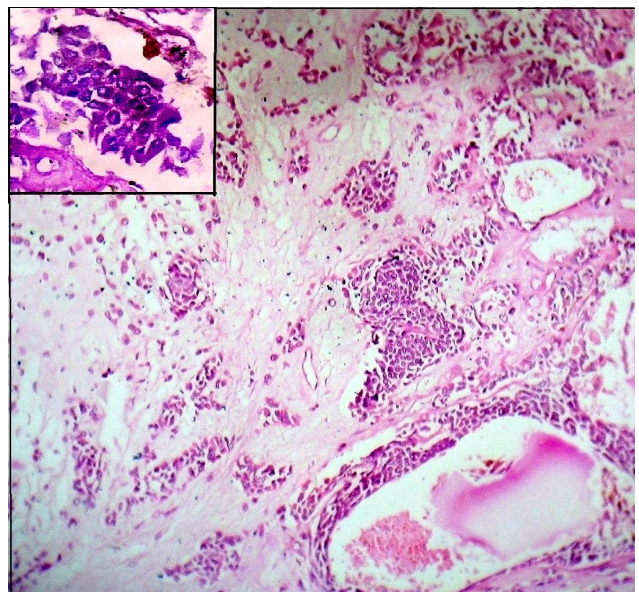


**Figure 1:** FNAC reveals round to oval cells with bland nuclei arranged in glandular pattern (40X, Giemsa)

The differential diagnosis of ceruminous adenoma includes ceruminous adenocarcinoma, neuroendocrine adenoma of middle ear, pleomorphic adenoma of parotid, meningioma and paraganglioma.<sup>[6]</sup> IHC is not necessary for the diagnosis but can be used to highlight the biphasic nature. The luminal cells will be positive for CK7, EMA and PANKERATIN.<sup>[3]</sup> The treatment for ceruminous adenoma is complete excision but the anatomic constraints of external auditory canal may make complete excision difficult and residual disease or recurrences has been reported. Present 2 cases were followed up for 2-3 years after excision and no recurrence noted.



**Figure 2:** Dilated glands containing secretions( 10X,H & E). Inset shows tumour cells arranged in dual layers( 40X,H &E).



**Figure 3:** Solid sheets of tumour cells and myxoid areas (10X, H & E). Inset shows PAS positive granules in the inner cell layer (40X).

**CONCLUSION:**

Two cases of ceruminous adenoma of external ear diagnosed on FNAC and confirmed by histopathology, presented here, are rare and the pathologist must be familiar with the cytological features to make preoperative diagnosis and thereafter sufficient excision of the tumour.

**REFERENCES:**

1. Namyslowski G, Scierski W, Misiolek M, Czecior E, Lang CD. Ceruminous gland adenoma of the external auditory

- canal – a case report. *Otolaryngol Pol* 2003;57:755-9.
2. Varshney H, Taneja V, Taneja MK. Ceruminous gland adenoma. *Ind J Otol* 2014;20:41-43.
  3. Lester DR, Thompson M D. Ear ceruminous Adenoma. *ENT J* 2011;1-7.
  4. Lester DR Thompson M D, Brenda L, Nelson E, Barnes L. Ceruminous Adenomas A clinicopathologic study of 41 cases with a review of literature. *Am J Surg Pathol* 2004;28:3.
  5. Mansour P, George MK, Pahor AL. Ceruminous gland tumour a reappraisal. *J Laryngol* 1992;106:727-32.
  6. Giuseppe M, Serena B, Sandro B, Cristiano DN, Vincenzos, Tommoso V, et al. Adenoma of ceruminous gland (ceruminoma) *Otol Neurotol* 2011;32:14-5.

**How to cite this article:** Mahanta AA, Andola SK: FNAC Diagnosis of Ceruminous Adenoma of External Auditory Canal with Histopathological Correlation-Report of Two Cases with Review of Literature. *PJSR* 2015; 8 (1):60-62.  
**Source of Support:** Nil, **Conflict of Interest:** None declared.