

# Acinic Cell Carcinoma Of Parotid Gland Surrounded By Prominent Lymphoid Tissue, Diagnostic Dilemma In F N A C , A Case Report.

B Gopinath, K Rupam, R Anadi, S Amitava

## Citation

B Gopinath, K Rupam, R Anadi, S Amitava. *Acinic Cell Carcinoma Of Parotid Gland Surrounded By Prominent Lymphoid Tissue, Diagnostic Dilemma In F N A C , A Case Report.* The Internet Journal of Pathology. 2010 Volume 11 Number 2.

## Abstract

Acinic cell carcinoma is a rare salivary gland cancer comprises 1% to 3% of all salivary gland tumors. The majority is located in the parotid gland (86.3% in largest study) but many examples in the minor salivary gland have been recorded. Cases have been reported where acinic cell carcinoma located within intraparotid lymph nodes<sup>[1]</sup> We hereby report a case where a 40 year old male had a right sided parotid swelling-for 2 years.

## INTRODUCTION

Acinic cell carcinoma is a rare salivary gland cancer comprises 1% to 3% of all salivary gland tumors. The majority is located in the parotid gland (86.3% in largest study) but many examples in the minor salivary gland have been recorded. Cases have been reported where acinic cell carcinoma located within intraparotid lymph nodes<sup>[1]</sup> We hereby report a case where a 40 year old male had a right sided parotid swelling-for 2 years. FNAC was performed and the diagnosis was suggestive of chronic sialadenitis with a advice for biopsy and histopathological examination to exclude acinic cell neoplasm as in FNA smear the cellularity was high with plenty of normal looking salivary acinar cells and lymphocytes in the background. Later on biopsy was performed and histopathology showed the features of acinic cell carcinoma with prominent lymphoid tissue in the periphery of the tumor.

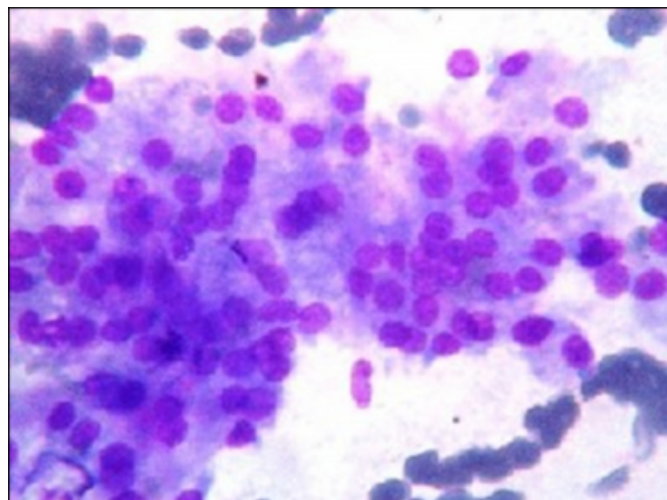
## CASE REPORT

A 40 year male presented to the surgical OPD with a right sided parotid swelling for 2 years. It was 4x3.5x3 cm in size, firm in consistency and nontender in palpation. As advised by the surgeon the patient attended in the department of pathology for Fine Needle Aspiration Cytology. FNAC was performed. Smears showed high cellularity. There were cohesive clusters of acinar cells some with central fibrovascular core. They resembled normal salivary acinar epithelial cells with finely vacuolated cytoplasm but nuclei were slightly larger than normal. Background showed mildly

pleomorphic medium sized bare nuclei; lymphocyte like (Figure-1). Considering the cytomorphological features our preliminary diagnosis was chronic sialadenitis with an advice of urgent biopsy and histopathological examination to exclude acinic cell neoplasm as cellularity was very high with anisonucleosis. A superficial parotidectomy was done and the specimen was sent for histopathological examination. Grossly the tumour size was 3x3x2.5 cms. Cut section showed an encapsulated mass with a solid, friable grayish white cut surface. The microscopic appearance showed a solid pattern of growth with a capsule at the periphery. The characteristic acinar cells known as acinic cells were round to polygonal in shape, nuclei showed mild to moderate enlargement and pleomorphism and cytoplasm were granular and basophilic. Lymphoid tissue well encapsulated was prominent at the periphery of the tumor (Figure-2). The histopathological diagnosis was given as "Acinic cell carcinoma surrounded by prominent lymphoid component".

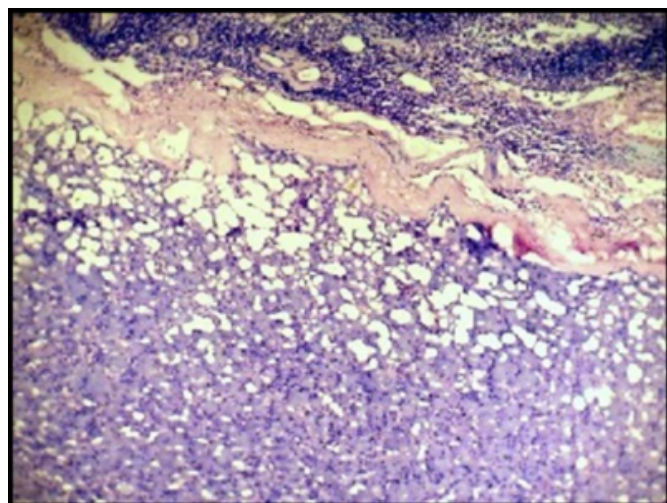
**Figure 1**

Figure-1: (F N A C showing sheets of acinar cells of salivary gland with slightly enlarged nuclei and vacuolated cytoplasm. No ductal cells found, (MGG; 400X)



**Figure 2**

Figure- 2: Photomicrograph showing histopathology of acinic cell carcinoma surrounded by prominent lymphoid tissue (H & E; 100X).



## DISCUSSION

Acinic cell carcinoma represents approximately 2% of salivary gland tumor, with almost 90% arising in the parotid gland. The tumor may arise in ectopic salivary gland tissue or it may be multiple or bilateral. Regional lymph node metastasis and distant metastasis are present in 10% and 6% of patients respectively<sup>[2]</sup> A clinicopathologic study was done by Perzin et,al on acinic cell carcinoma arising from salivary glands. Out of 51 cases, 37(72%) was found to arise from parotid gland, 6 from submandibular gland and 8 from

oral cavity<sup>[3]</sup>

Lidang. Jenson M et al reported a case of a poorly differentiated acinic cell carcinoma with primary presentation in a hyperplastic intraparotid lymph node<sup>[1]</sup> In the multiple sections reviewed by them showed a single tumor nodule in salivary gland tissue with the lymph node structure outside . The possibility of a microscopic clinically occult primary acinic cell carcinoma that metastasized and presented primarily in an intraparotid lymph node might be one etiological factor. A multifocal origin of this tumor in salivary tissue within and outside the intraglandular lymph node is another assumption.

Michal M, Skalova A et al studied 69 acinic cell carcinoma of salivary gland of which 12 constituted had a distinct subgroup. This most characteristic feature was a dense lymphoid stroma surrounding the epithelial component of the tumor and these tumors were enveloped by this fibrous pseudocapsule, thus mimicking an intraparotid lymph node containing a metastasis<sup>[4]</sup>

In our case, the histopathology showed the tumor was composed predominantly of solid area with epithelial component consisting of acinic cells having abundant basophilic granular cytoplasm and nuclei showed mild anisonucleosis with peripheral pseudocapsule and outside this capsule there was prominent lymphoid structure.

In FNAC we had a misdiagnosis of this tumor as chronic sialadenitis as there were abundant normal looking acinar structures with mononuclear cells comprising mainly of lymphoid cells in the background. After histopathological confirmation of the tumour as acinic cell carcinoma in parotid gland with prominent lymphoid tissue in the periphery, the FNAC slides were reviewed and it was observed that most of those acinar cell clusters were devoid of fibrovascular core which were against the benign nature of this lesion.

Not only sialadenitis but other neoplastic lesions are also included in the differential diagnosis of acinic cell carcinoma. Nagen et,al, in a retrospective analytical study on 40 primary cases of acinic cell carcinoma reported that , acinic cell carcinoma is characterized not only by acinar differentiated cells but also other neoplastic cell types like vacuolated cells and cells resembling oncocytes. They said, a pronounced lymphocytic reaction is a hallmark of 10% of acinic cell carcinoma aspirate. The differential diagnosis of acinic cell carcinoma encompasses adenocarcinoma,

pleomorphic salivary adenoma, mucoepidermoid carcinoma, Warthin tumor, sialoadenosis and sialadenitis<sup>[5]</sup>

So, acinic cell carcinoma with lymphoid stroma outside may lead to a diagnostic dilemma in FNAC. Acinic cell carcinoma with lymphoid stroma outside is rare situation where the possibilities might be 1) tumor associated with adjoining lymphoid structure. 2) multifocal origin of the tumor, 3) metastasis in intraparotid lymph node from occult primary.

In another follow up study by Michel M, Skalova A, et al, suggested that acinic cell carcinoma accompanied by lymphoid stroma with well developed germinal centre have a particularly favorable prognosis<sup>[4]</sup>

So, acinic cell carcinoma is a malignant salivary gland neoplasm with a relatively low rate of lymphatic spread to regional lymph nodes. Distant metastasis are rare and there occurrence typically indicates an unfavorable outcome. Tavora F, Rassaci N et al reported an unusual example of acinic cell carcinoma that initially presented in the lung whereas primary parotid carcinoma became apparent one

year after initial diagnosis<sup>[6]</sup>

In this case there was no feature of distant metastasis.

Initially the patient had a superficial parotidectomy and later on a radical operation showed complete clearance of tumor and margins were clear from tumor process and the patient is on follow-up and doing well till last follow up examination.

## References

1. Lidang Jensen M, Kiaer H. acinic cell carcinoma with primary presentation in an intraparotid lymph node. *Pathol Res Pract*, 1992 Feb; 188(1-2):226-31
2. Spiro RH, Huvos AG, Strong EW. Acinic cell carcinoma of salivary origin, a clinicopathologic study of 67 cases, *Cancer* 1978; 41:924-935
3. Karl H Perzin, Virginia A Livolsi et al, Acinic cell carcinoma arising in salivary glands, A clinicopathologic study . *Cancer* 2006 ; 44(4): 1434-57.
4. Michal M, Skalova A et al . well differentiated acinic cell carcinoma of salivary glands associated with lymphoid stroma. *Human pathology* 1997; (28):595-600
5. Holger Nagel ,Rainer Laskawi et al, Cytologic diagnosis of acinic cell carcinoma of salivary glands , *Cytopathol* 1997; 16:402-12.
6. Tavora F, Rassaci N, Shilo K et al .occult primary parotid gland acinic cell adenocarcinoma presenting wuth extensive lung metastasis. *Arch Pathol Lab Med*. 2007 June; 131(6): 970-3

**Author Information**

**Barui Gopinath, MD**

Associate Professor, Department of Pathology, R G KAR MEDICAL COLLEGE

**Karmakar Rupam, MD**

Associate Professor, Department of Pathology, R G KAR MEDICAL COLLEGE

**Roychowdhury Anadi, MD**

Assistant Professor, Department of Pathology, R G KAR MEDICAL COLLEGE

**Sinha Amitava, MD**

Additional Professor, Department of Pathology, R G KAR MEDICAL COLLEGE