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CASE REPORT -RARE PRESENTATION OF ACINIC CELL CARCINOMA OF PAROTID GLAND.

Oncology

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ABSTRACT

Acinic cell carcinoma (ACC) is a relatively uncommon malignancy of the salivary glands, typically affecting the parotid gland. Here, we present a case report of a 42-year-old female patient diagnosed with a rare variant of ACC of the parotid gland. The patient presented with a painless mass in the preauricular region with no facial nerve weakness, which gradually increased in size over several months. Fine-needle aspiration cytology (FNAC) and subsequent histopathological examination revealed features where not consistent with ACC, albeit with atypical morphological characteristics. The patient underwent surgical resection of the tumor followed by adjuvant radiotherapy. Despite the rarity of the tumor subtype, a multidisciplinary approach involving oncologists, pathologists, and radiologists facilitated accurate diagnosis and optimal treatment planning. Long-term follow-up demonstrated no evidence of recurrence or metastasis, emphasizing the importance of meticulous histopathological evaluation and comprehensive management in achieving favorable outcomes in patients with rare variants of ACC. This case report contributes to the existing literature on the clinical presentation, diagnosis, and management of rare salivary gland malignancies, underscoring the significance of individualized treatment strategies tailored to the specific histological subtype.

KEYWORDS

Acinic Cell Carcinoma, Parotid Gland, Rare Variant, Salivary Gland Neoplasms, Adjuvant Radiotherapy, Multidisciplinary Approach, Oncology, Pathology, Radiology

INTRODUCTION

Acinic cell carcinoma (ACC) is a relatively rare malignant tumor arising from the salivary glands, accounting for approximately 2-4% of all salivary gland neoplasms. It predominantly originates in the parotid gland, although cases involving other major and minor salivary glands have also been reported. ACC is characterized by its histological resemblance to normal acinar cells and typically presents as a slow-growing, painless mass in the affected gland [1,2].

While ACC is generally considered a low-grade malignancy with favorable prognosis, there exist rare variants of this tumor that pose diagnostic and therapeutic challenges due to their atypical histological features and clinical behaviour [6]. These variants may exhibit unusual morphological characteristics, leading to difficulties in accurate diagnosis and classification [8].

In this context, we present a case report of a 42-year-old female patient diagnosed with a rare variant of ACC originating from the parotid gland. The rarity of this variant underscores the importance of thorough clinical evaluation, precise histopathological examination, and comprehensive management strategies tailored to the specific tumor subtype.

Through this case report, we aim to highlight the clinical presentation, diagnostic challenges, treatment modalities, and outcomes associated with rare variants of ACC. Additionally, we emphasize the significance of a multidisciplinary approach involving oncologists, pathologists, radiologists, and surgeons in the effective management of such cases.

Overall, this case contributes to the existing literature on salivary gland neoplasms, providing insights into the diagnosis and management of rare variants of ACC and underscoring the importance of individualized treatment strategies in optimizing patient outcomes.

CASE REPORT

A female patient of 42 years old with no known medical illness who presented presented to OPD of Yenepoya Dental college with chief complaint of swelling on left side of the face for 3 months, which was insidious in onset and progressive in nature.

On examination a swelling of 3.5x3 cm extending superior-inferiorly 0.5cm below the ala-tragal line, extending till lower border of mandible and antero-posteriorly 5cm away from the ala of the nose and till posterior border of ramus of mandible, up to angle of mandible with well-defined borders.

Skin over the On palpation, multi-lobular swelling measuring 3.5cm X 3cm which is soft, non-tender and compressible on palpation. Restricted mobility was elicited. Skin over the swelling- pinchable. Further examination revealed no significant intra-oral findings. (fig.1a, b and c)

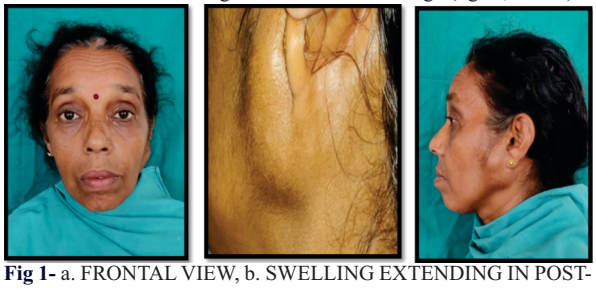

Fig 1- a. FRONTAL VIEW, b. SWELLING EXTENDING IN POST-AURICULAR REGION, c. LEFT SIDED VIEW.

Suggestive of cystic lesion. Skin over swelling appears to be normal in color. Facial nerve function was not affected. FNAC revealed cyst macrophages and inflammatory cells in a background of necrotic debris along with clusters of acinar cells. Fluid was chocolate colored. (fig2)

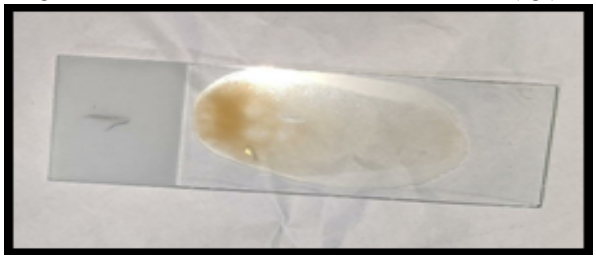

Fig2. Chocolate Colored Fluid On Slide For FNAC.

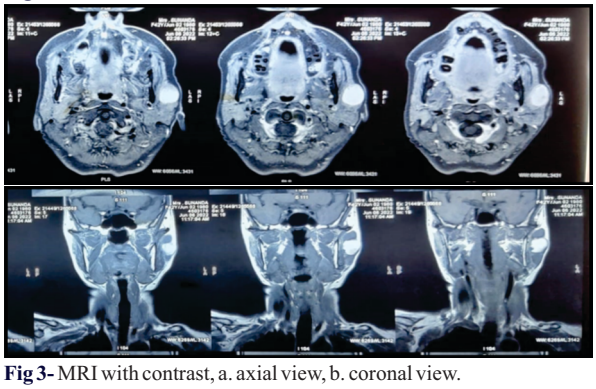

Fig 3- MRI with contrast, a. axial view, b. coronal view.

MRI NECK WITH CONTRAST GADOLIUM DYE revealed a well-defined, thin, smooth-walled cystic lesion within the superficial part of the left parotid gland measuring about 2cm × 2 cm × 2 cm. The fluid content of the lesion appeared hypertense on T1 as well as T2-weighted imaging (WI), suggestive of high proteinaceous or hemorrhagic content with no solid component. MRI picture was, therefore, indicative of a benign cystic lesion of the left parotid gland with a differential diagnosis of branchial cleft cyst involving the superficial lobe. (Fig.3 a and b)

Based on investigation and clinical findings wide local excision of cyst was planned while preserving the superficial lobe. Patient was painted and draped under all asepetic precautions(fig4a). Markings was done for Modified blair's incision (fig.4b). The incision was then performed layer by layer until it reached the platysma muscle(fig.4c). Muscle was dissected to expose the underneath cyst capsule. Once the plane between cyst capsule and platysma muscle was identified, the blunt dissection was carried out carefully separating the cyst from the sternocleidomastoid muscle posteriorly and the posterior belly of digastric muscle underneath with the preservation of facial nerve. Multiple cystic lesion on exposure seen (fig. 5a and b). However, the upper part of the cyst was found embedded in the parotid tissue, so part of the superficial lobe of the left parotid gland was excised together with the cyst (fig. 6 a and b). Complete excision with sufficient margin of normal surrounding tissue was done and later the specimen was then sent for histopathological examination (HPE) (fig. 7). Minivac drain 50ml (fig. 8 a and b) was inserted and stabilized using 3-0 silk. Closure was done using 3-0 vicryl and 5-0 prolene(fig.9). Final HPE report features were suggestive of low-grade malignant neoplasm with extensive clear cell change of the left parotid gland. Suggestive of acinic cell carcinoma.

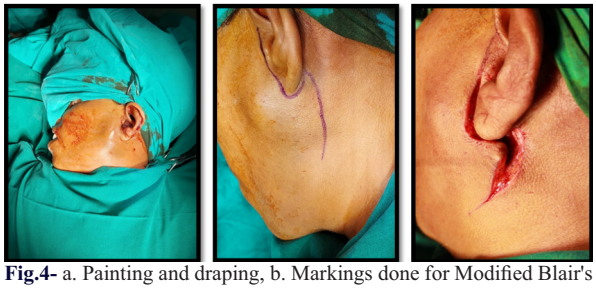

Fig.4- a. Painting and draping, b. Markings done for Modified Blair's incision, c. Incision placed.

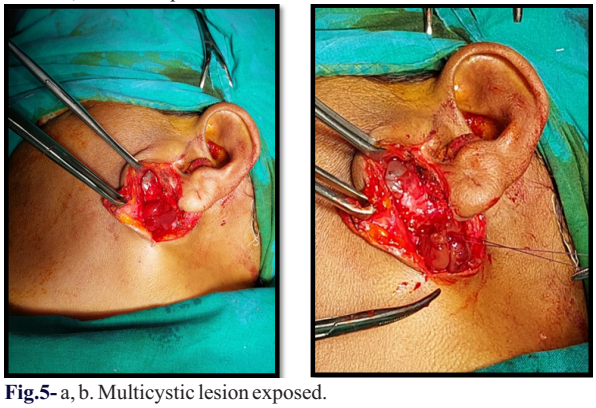

Fig.5- a, b. Multicystic lesion exposed.

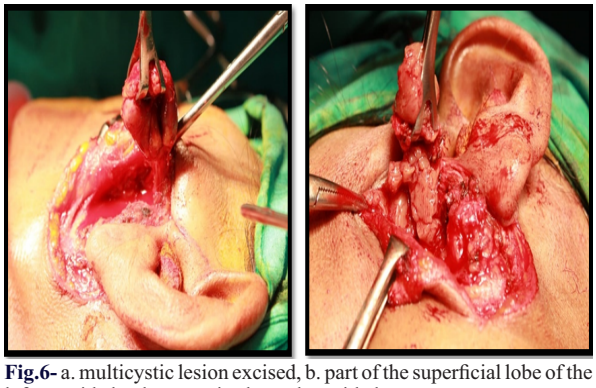

Fig.6- a. multicystic lesion excised, b. part of the superficial lobe of the left parotid gland was excised together with the cyst.

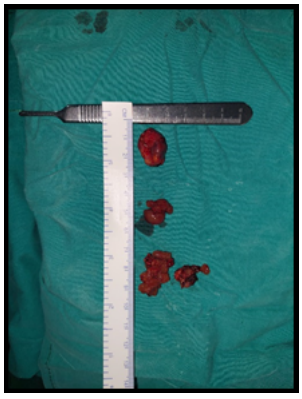

Fig.7- Excised Specimen

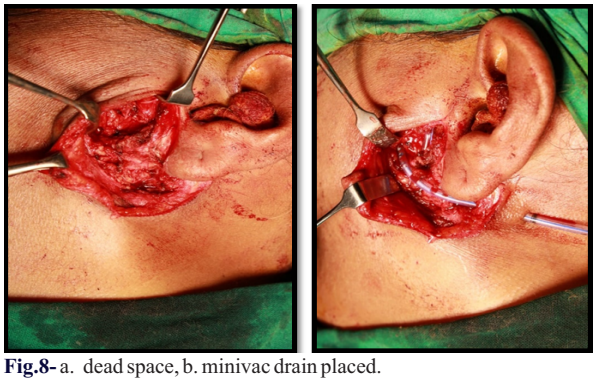

Fig.8- a. dead space, b. minivac drain placed.

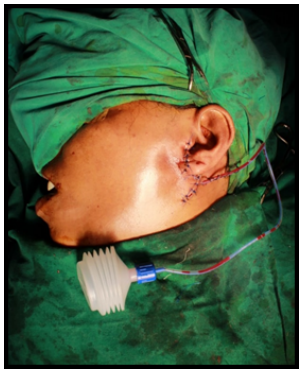

Fig. 9- Closure done using 3-0 vicryl and 5-0 prolene.

Facial nerve monitoring was done immediately post-op, weakness of the left side facial nerve motor function elicited which subsided gradually. Based on the final HPE report patient was advised radiotherapy 10 days after surgery, patient was followed-up for 2 years and MRI was advised, report suggested no recurrence and on clinical examination no facial nerve weakness was noted.

DISCUSSION

Batsakis et.al confirmed four variants of ACCs- solid, micro-cystic, papillary and follicular of which papillary and follicular is most common [2]. Cystic variant of acinic cell carcinoma of the parotid gland is rare (2-3%). However, we must keep in mind that the morphological subtypes related to the tumor pattern do not play a known role related to therapeutic or prognostic purposes. No known imaging characteristics of cystic ACCs have been found on CT, MRI, or ultrasound imaging. The diagnosis of ACCs using only imaging studies is complex due to its great radiologic similarity with benign tumors [3,4]. The recurrence rate is 30%, and metastasize can occur in 15% of the cases. The 5-year survival rate after surgery is over 80%, but below 65% at 10 years. [5]

Debate continues regarding the extent of resection needed, as well as the role for neck dissection and adjuvant radiotherapy [8]. In present case, excision of cyst along with sufficient margin of normal parotid tissue was done. The patient was then subsequently referred for radiotherapy. Nevertheless, follow up of the patient did not show any mass, recurrence or metastasis.

However, further case studies and long-term follow-up is indicated for further documentation. This unusual tumor is known for local recurrence after surgical excision in 23–50 % of cases [6]. Being a rare histopathology, standard treatment approach is still not known. Immunohistochemistry CK (as CK 7 or 18), DOG1 has been useful, although not specific for this entity. Acinic cell carcinoma is the low grade malignant salivary neoplasm rarely diagnosed in salivary gland which may be overlooked. The overall prognosis after the surgical resection depends on extent of lesion and adequacy of initial resection [4].

In conclusion, careful long term follow up protocol is advised in view of its malignant potential. It requires a high index of clinical suspicion, prompt diagnosis and definitive initial surgical treatment. If the condition is appropriately dealt with from the beginning, its morbidity is extremely low and permanent cure is highly probable.

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