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Case Report

MUCOEPIDERMOID CARCINOMA OF PAROTID: A RARE CASE REPORT

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ABSTRACT
We report an interesting case of a 12 year old boy who presented with a painless, imobile, spherical and firm swelling in the left parotid region. The fine needle aspiration revealed a pleomorphic adenoma of parotid. On the operative table,the tumour was noted to be firm, irregular and adherent to the underlying structures. Histopathological findings were in contrast with the FNAC ones and the specimen was reported to be a mucoepidermoid carcinoma. Recovery period was uneventful. This presentation of Mucoepidermoid carcinoma is one of the rare unique reported cases.

Key Words: *Mucoepidermoid Carcinoma, Parotid, Child*

INTRODUCTION
In 1945, Stewart *et al.*, recognized Mucoepidermoid of the salivary gland as a separate entity among salivary neoplasm. Mucoepidermoid Carcinoma is thought to arise from plueri-potent reserve cells of the excretory ducts of salivary gland that have the potential to differentiate into squamous, columnar and mucous cells (Splitz, 1984). Although no specific etiologic factors have been identified exposure to ionizing radiation has been reported in some cases (Margaret, 2001). A mucoepidermoid carcinoma account for 5% of all salivary gland tumours commonly arise within the parotid gland and is the most common malignant tumour to arise in children and adolescents under 20 years of age (Gustafsson,1987). The tumour is a firm to hard mass and usually asymptomatic. Pain is associated with high grade malignant tumours. Mostly they do not cause facial nerve paralysis when they occur in parotid gland (Spiro, 1978). Mucoepidermoid carcinoma, have a prognosis based upon the clinical stage and histological grade with a good prognosis of Mucoepidermoid carcinoma in children as majority of them are well differentiated or grade I neoplasm (Guzzo, 2002). Low grade mucoepidermoid carcinoma has a better 5 year survival rate from 92–100 % compare to high grade mucoepidermoid carcinoma with 0–43 % survival rate8 with an overall incidence of lymph node involvement ranges from 18–28%. Postoperative local recurrence is more likely to occur in patients with positive margins regardless of the grade. We report on an unusual unique case of mucoepidermoid carcinoma parotid which was thought to be a pleomorhic adenoma preoperatively according to the ultrasonography, CT-scan and FNAC reports.

CASE
A 12 -year-old boy presented to our outpatient department with painless swelling in left parotid region since 7 months. The swelling progressively increased in size of a peanut to present size of a large lemon. Patient's medical history was unremarkable. On examination a firm, discrete, oval swelling of size 3x2.5x2 cms was found (Figure 1) . Fluctuation, reducibility, compressibility, movement with deglutition or protrusion of tongue was absent. His facial nerve was intact and regional lymph nodes were non palpable. Computed tomography (CT) showed an infiltrative mass lesion occupying the lower pole of left parotid gland (Figure 2). Fine needle aspiration cytology reported it to be a pleomorphic adenoma.
The patient was taken up for surgery. Under general anesthesia through a 'S' shaped incison the mass was exposed after dividing the masseter muscle. It was found to be irregular and firmly adherent to underlying structures, raising the suspicion of malignancy. After removal of mass the deep lobe of parotid gland could be seen. The wound was closed in layers after placing a drain. Histopathological slides showed round to ovoid shaped tumour cells, having vesicular nuclei with prominent nucleoli and deep eosinophlic

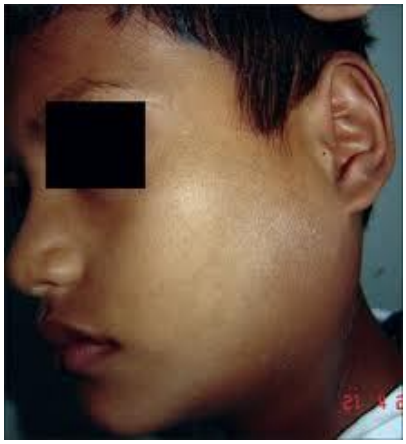

Figure 1: Image of the patient showing a left parotid mass

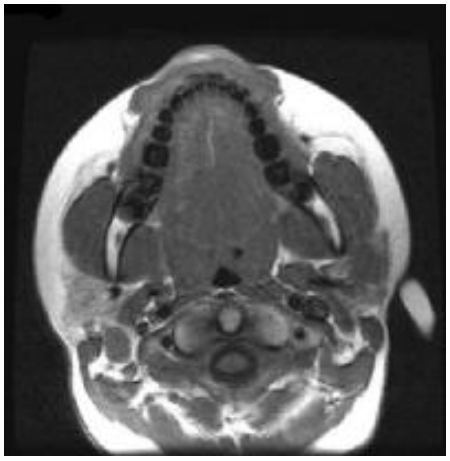

Figure 2: CT scan showing a left parotid mass lesion

cytoplasm arranged into groups and sheets (Figure 3). The patient recovered smoothly and was discharged on 4th postoperative day. The unusual presentation of mucoepidermoid carcinoma of parotid is one of the rare youngest reported patients.

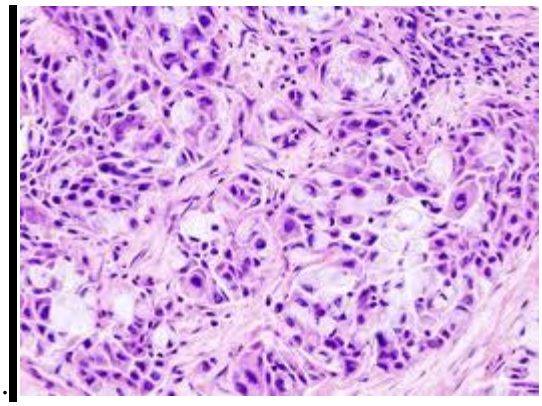

Figure 3: Histopathology slide showing mucoepidermoid carcinoma

DISCUSSION

Salivary gland tumours account for less than 5% of head and neck neoplasm with mucoepidermoid carcinoma is the most common malignant tumour mostly arises in parotid gland (Pires, 2004). The paediatric parotid gland and peri-parotid region are subject to a variety of lesions and are most often evaluated with ultra sound, contrast CT and MRI. Ultrasound distinguish cystic from solid lesion and guide fine needle aspiration (Garcia, 1998). Tumours of the salivary glands are uncommon in children; accounting for only 1% of all paediatric neoplasm commonly arises in parotid gland (Shikhani, 1988). Up to 65% of the tumours are benign and larger the gland of origin in children the most likely that tumour will be malignant. Mucoepidermoid carcinoma is the most common malignant salivary gland neoplasm in children and adolescence and is rarely found in children under the age of 10 years. Up to 35% of all salivary neoplasms in children are malignant, and 60% of these are mucoepidermoid carcinoma (Myer, 1986). The histological pattern in mucoepidermoid carcinoma consists of a combination of squamous and mucous cells arranged in cords, sheets, or cystic configuration and are classified as low, intermediate or high grade. Mucoepidermoid carcinoma is the most common malignant salivary gland neoplasm in

children and adolescence and is rarely found in children under the age of 10 years. 10 up to 35% of all salivary neoplasms in children are malignant, and 60% of these are mucoepidermoid carcinoma (Myer, 1986). The histological pattern in mucoepidermoid carcinoma consists of a combination of squamous and mucous cells arranged in cords, sheets, or cystic configuration and are classified as low, intermediate or high grade. Mucoepidermoid carcinoma is treated surgically with local wide block excision for low grade neoplasms and wide block excision with radical neck dissection for high grade neoplasms where there is clinical evidence of regional metastasis, high TNM stage, high histological grade and involvement of regional lymph nodes. Radiotherapy should be used only in selected cases because of long term adverse effects and the role of chemotherapy in the management of mucoepidermoid carcinoma is generally reserved for patients with aggressive local or metastatic disease that is not amenable to surgical or radiation therapy with long term follow up is essential to rule out late recurrence (Rahbar, 2006).

CONCLUSION

Mucoepidermoid carcinoma of the parotid is very rare in children. Clinical stage and histological grade are the main prognostic factors. As conclusion, although rare, the presence of a parotid mass with progressive growth in a child could correspond to a mucoepidermoid carcinoma.

REFERENCES

García CJ, Flores PA, Arce JD, Chuaqui B and Schwartz DS (1998). Ultrasonography in the study of salivary gland lesions in children. *Pediatric Radiology* **4**(3) 418–25.

Gustafsson H, Dahlqvist A and Carlsoo B (1987). Mucoepidermoid carcinoma in a minor salivary gland in childhood. *Laryngological Otologica* **2**(3) 101-112.

Guzzo M, Andreola S, Sirizzotti G and Cantu G (2002). Mucoepidermoid carcinoma of the salivary glands: clinicopathologic review of 108 patients treated at the National Cancer Institute of Milan. *Annals of Surgical Onocology* **3**(9) 688–95.

Margaret SB, Katya I and Derrick IW (2001). Muco epidermoid carcinoma. A clinicopathologic study. *American Journal of Surgical Pathology* **3**(2) 835–45.

Myer C, Cotton RT (1986). Salivary gland disease in children: a review. Acquired non-neoplastic disease. *Clinical Pediatrics* **4**(2) 314–22.

Pires FR, de Almeida OP, de Araújo VC and Kowalski LP (2004). Prognostic factors in head and neck mucoepidermoid carcinoma. *Archives of Otolaryngology & Head neck Surgery* **5**(3) 174–80.

Rahbar R, Grimmer JF, Vargas SO, Robson CD, Mack JW and Perez-Atayde AR (2006). Mucoepidermoid carcinoma of the parotid gland in children: A 10-year experience. *Archives of Otolaryngology & Head Neck Surgery* **4**(80) 132:375.

Shikhani AH and Johns ME (1988). Tumors of the major salivary glands in children. *Archives of otolaryngology & Head and Neck Surgery* **8**(10) 257–63.

Spiro RH, Huvos AG, Berk R and Strong EW (1978). Mucoepidermoid carcinoma of salivary gland origin. A clinicopathologic study of 367 cases. *American Journal of Surgery* **4**(3) 461–8.

Splitz MR and Bataskis JG (1984). Major Salivary Gland carcinoma; descriptive epidemiology and survival of 498 patients. *Archives of Otolaryngology* **2** (5)110-115.