

# MALIGNANT PAROTID TUMOR IN A FOUR YEARS OLD BOY – A CASE REPORT

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## Introduction:

Head neck malignancy includes carcinoma arising from mucosa of upper aero-digestive tract including salivary glands. Salivary gland tumors account for less than 5% of head and neck neoplasm<sup>1</sup>. Head neck cancer is a disease of elderly people. Salivary gland tumors are exception- which occurs in younger age group, usually in second or third decades<sup>2</sup>. It may occur in a bit more younger age as reported in several articles. In Children, more than 80% of salivary gland tumors are benign<sup>3</sup>. But malignant parotid neoplasm at the age of four years is new to us- hence reporting.

## Case Report:

Kakon, a 4 years old boy, hailing from Basepara, Jessore, attended Dhaka Medical College Hospital on 1<sup>st</sup> March 2008 with the complaints of swelling in front of his right ear for 2 years. The swelling was gradually increasing in size and the consistency gradually became harder. The boy was otherwise fit and well. Clinical examination revealed a 4X4 cm swelling in right parotid area which was normochemic, non tender, soft in consistency, mobile, fluctuant, not fixed to the underlying structure nor adherent to the skin. His facial nerve was intact and regional lymph nodes are not palpable. Other parameters of general examinations were normal. Systemic examination revealed no abnormality.

Investigations showed a hemoglobin of 12.2 g/dl, WBC – 8000/dl, differential- Neutrophil 78%, Lymphocyte- 14%, Platelets 320 x 10<sup>9</sup>/dl . ESR was normal. Biochemical profile revealed normal renal & liver functions. X-ray neck lateral view was normal. X-ray of cervical spine revealed no bony or joint involvement. X-ray

chest was also normal. FNAC from the swelling revealed low grade mucoepidermoid carcinoma of parotid gland.

Superficial parotidectomy was done on 4<sup>th</sup> March, 2008. Histopathological findings were consistent with low grade mucoepidermoid carcinoma of parotid gland. So, no further treatment was advised. He was symptom less for 1 month. But again he developed swelling in the same region. Then superficial parotidectomy was done for second time on 5<sup>th</sup> May, 2008. As the patient presented with recurrence after first surgery, chemotherapy was advised. Six cycles of chemotherapy was given with the following schedule from 20-5-2008 to 5-10-2008

Inj. Cyclophosphamide 250mg IV Day<sub>1</sub>

Inj. Epirubicin 30mg IV Day<sub>1</sub>

Inj. Cisplatin 13mg IV drip Day<sub>1-3</sub>

The cycle was three weekly.

The patient is now symptom free. The swelling subsided. He is on 6 monthly follow up for last 10 months.

## Discussion:

In 1945, Stewart et al<sup>4</sup> recognized Mucoepidermoid carcinoma as a separate entity among salivary gland neoplasia. It is thought to arise from pluripotent reserve cells of salivary excretory ducts that may differentiate into squamous, columnar and mucous cells<sup>5</sup>.

Salivary gland neoplasms are rare in children, accounting only 1% of all paediatric neoplasms<sup>6</sup> and fewer than 10% of paediatric head neck tumors<sup>7</sup>. Approximately 80% salivary gland tumors are benign.<sup>3</sup> Mucoepidermoid carcinoma accounts for 50% of malignant salivary gland tumors in children.<sup>8</sup>

Mucoepidermoid carcinoma is the most common salivary gland neoplasm in children

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but it is rarely found under the age of 10 years.<sup>5</sup> Histopathological examination of the tumor of this patient revealed low grade mucoepidermoid carcinoma of parotid gland and exceptionally the age of this patient is only 4 years.

Although no specific etiological factor has been identified, exposure to ionizing radiation has been reported in some cases.<sup>9</sup> In this case there was no history of radiation exposure.

The characteristic presentation of a salivary gland tumor is a firm to hard, slow growing mass<sup>6</sup>. Signs and symptoms may not distinguish between malignant and benign tumors<sup>7</sup> unless there is pain, regional lymphadenopathy or cranial nerve involvement that indicates aggressive malignant process.<sup>5,10</sup> Our patient presented with a gradually increasing swelling in right parotid region which was at first firm and latter became hard in consistency. There was no pain, lymphadenopathy or facial nerve palsy.

The accuracy of FNAC is 84% to 97% in salivary gland tumors. Incisional biopsy is not recommended due to risk of tumor spillage and facial nerve injury. Imaging studies are recommended preoperatively to see the extent of disease and regional lymph node involvement<sup>11</sup>. In this case FNAC and radiological imaging was done. CT scan and MRI were not done due to inaffordability.

The treatment of choice is complete excision (superficial or total parotidectomy) with preservation of facial nerve.<sup>2,11</sup> Total parotidectomy is indicated when deep lobe is involved or positive intra parotid lymph node. Neck dissection should be considered when there is regional metastasis, high TNM stage, and high histologic grade<sup>11</sup>.

Because of possibility of long-term adverse effect in paediatric patients, radiotherapy should be used only in selective cases. The indications are aggressive tumor with perineural invasion, soft tissue extension or multiple nodal involvement, high grade tumor and unresectable residual disease.<sup>2,6,11</sup>

Chemotherapy has been reserved for patients with progressive local or metastatic disease that is not amenable to surgical or radiation therapy.<sup>2,11,12</sup> In this case the patient presented with recurrence after 1<sup>st</sup> surgery in a very short period of time. Hence chemotherapy was prescribed after 2<sup>nd</sup> surgery to avoid further

recurrence.

Clinical stage and histologic grade are the main prognostic factors in mucoepidermoid carcinoma.<sup>11,12</sup> A good prognosis is revealed in cases of mucoepidermoid carcinoma occurring in children.<sup>12</sup> As our patient is only 4 years old and the histopathology of the tumor showed low grade mucoepidermoid carcinoma, the prognosis should be good.

### Conclusion:

Salivary gland tumor though rare in children, may occur. If proper and adequate treatment is provided to these patients, their response is very well- hence reporting the case.

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