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Primary Intracranial Squamous Cell Carcinoma Denovo in the Cerebello-Pontine Angle

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Case Report

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Abstract: A 50 year old male presented with complaints of multiple episodes of vomiting, slurred speech, right limbs weakness and intermittent headache. Computed Tomography Scan of Brain and MRI of Brain showed evidence of 3.8X1.8 cm hyperdense extra axial lesion with calcification in the region of left Cerebello-Pontine Angle with perilesional edema. He underwent left Retromastoid and Retrosigmoid craniectomy and excision of tumor. Histo-Pathological examination revealed moderately differentiated Squamous Cell Carcinoma. Post operatively, patient was referred to Regional Institute of Oncology for the needful Radiotherapy and Chemotherapy.

Keywords: Primary Squamous Cell Carcinoma, Cerebello-Pontine Angle.

INTRODUCTION

A primary intracranial squamous cell carcinoma that develops in the absence of a pre-existing lesion is extremely rare and previously reported in only few adult individuals. Primary intracranial squamous cell carcinomas are very rare, and it seems that most arise from pre-existing benign intracranial Dysembryogenic tumors, such as Epidermoids [1] or Dermoid cysts [2] and Craniopharyngiomas. They may also rarely arise as areas of metaplastic transformation in Glioblastomas [3]. Most of the squamous cell carcinomas that occur in the CNS are Metastases [4] from other organs or result from direct invasion from a primary Head and Neck malignancies. The present case of an intracranial Squamous Cell Carcinoma that seems to have arisen Denovo in the absence of a pre-existing tumor is, to our knowledge, only the sixth such reported case [1].

CASE REPORT

A 50 year old male admitted in Neurosurgical department with complaints of intermittent headache for 3 months; slurred speech, weakness of right limbs for 15 days, and multiple episodes of vomiting for 5 days. He was known hypertensive for 1year and received regular treatment. He was diagnosed to have cerebral infarct with right hemiplegia one year ago, which improved over a period of 6 months before admission in our department and he had no other significant past medical history. On neurological examination he was conscious, disoriented but obeying verbal commands and Glasgow Coma Scale of E4V4M6 with grade 3/5 power in right upper and lower limbs (post stroke residual weakness), left Facial palsy and gag reflex was absent. A Computed Tomography scan of Brain (figure 1.) showed evidence of 3.8X1.8 cm hyperdense extra axial lesion with calcification noted in the region of left Cerebello-Pontine Angle with perilesional edema in the adjacent Cerebellar hemisphere causing compression of left Middle Cerebellar Peduncle and 4th ventricle with midline shift and obstructive hydrocephalus. Within few hours, patient underwent right Ventriculo-Peritoneal shunt (Figure 2) as an emergency. Further multiplanar MRI of Brain was done, which revealed a hyperintense extra axial lesion in left Cerebello-Pontine Angle with surrounding edema (figure3.). Correlating the CT scan and MRI findings, a presumptive Pre-operative Radiological diagnosis of left Cerebello-Pontine Angle Meningioma was made. He underwent left Retromastoid and Retrosigmoid craniectomy and excision of tumor and subsequently tumor specimen was sent for Histo-Pathological examination. Intraoperative surgical findings of lesion are, grayish pink, hard, gritty, non suckable mass measuring approximately 3x2 cm, attached to dura.

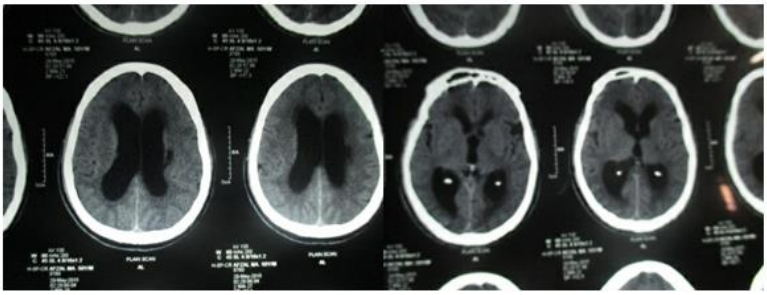

Fig-1: CT scan showing hydrocephalus

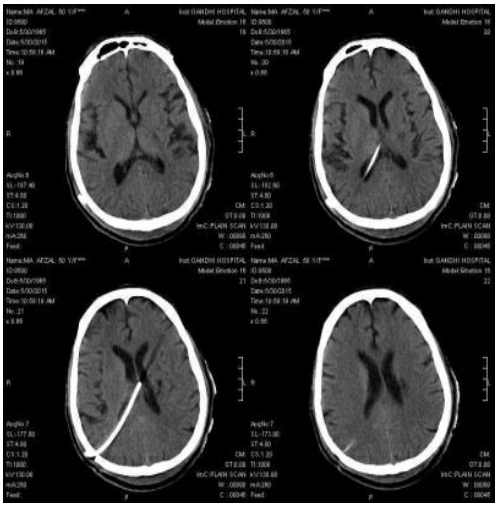

Fig-2: Post VP SHUNT CT scans

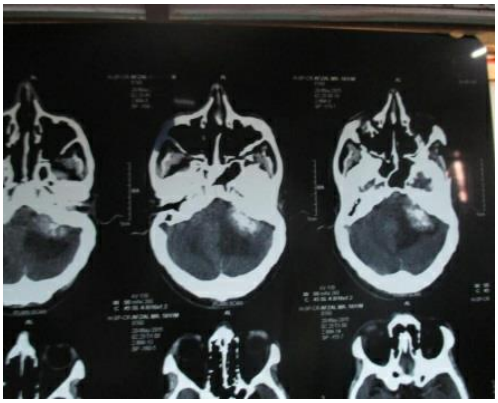

Fig-3: Hyperdense extra axial lesion in left Cerebello-Pontine Angle

Histo-Pathological examination

The surgical specimen consisted of multiple grayish white to grayish brown soft tissue measuring approximately 2.5 X 1.8 X 0.8 cm in aggregate. Slides of the Processed Paraffin-embedded sections showed multiple bits of tissue containing stratified Squamous Epithelium of Keratinizing type (Figure 4.) with loss of polarity, hyperchromatism, and moderate Pleomorphism (Figure 5.). Focal areas showed keratin pearls and epithelial pearls (Figure 6.). Mitotic activity is moderate (Figure 7).

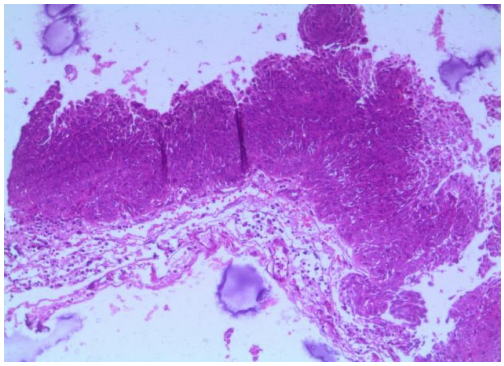

Fig-4: Stratified Squamous Epithelium of Keratinizing type

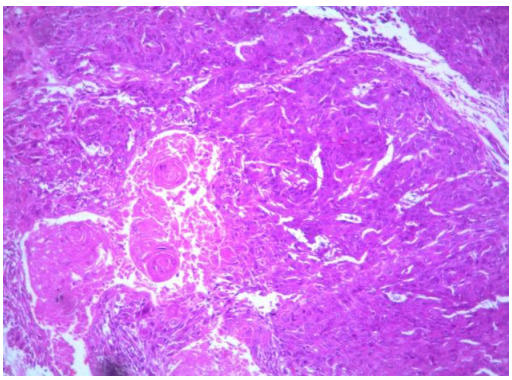

Fig-5: 10X loss of polarity, hyperchromatism, and moderate Pleomorphism

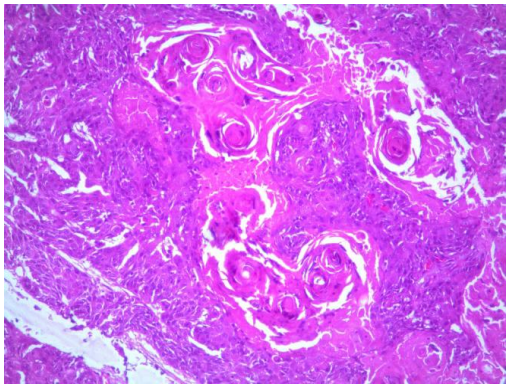

Fig-6: 10X0001keratin pearls and epithelial pearls

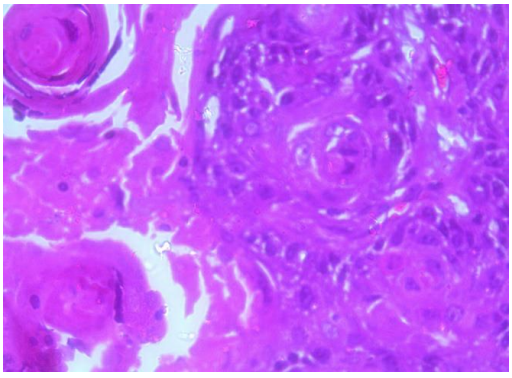

Fig-7: 40X Moderate Mitotic activity

Post operatively the patient underwent extensive work up for extra cranial primary lesion. Clinical examination, CT scans of Neck, Chest and Abdomen were unremarkable. After resection of the CP angle tumor the patient's slurring of speech and the difficulty in swallowing improved. The patient was referred to Oncologist at Regional Institute of Oncology for further treatment.

CONCLUSION

Primary Intracranial Squamous Carcinomas are very rare. Primary Intracranial Squamous Carcinoma in CP angle location is extremely rare incident, hence reported. We need to investigate extensively to rule out if there is any possible Primary Carcinoma in the body before we conclude a Primary Intracranial Squamous Carcinoma.

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