Letter to Editor

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A Rare Catastrophy Beyond Imagination-Supratentorial Sub Dural Haematoma During Cerebellopontine Angle Tumour Surgery

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Dear Sir,

Elective cranial surgeries are associated with few risks either due to their anatomical location/ pathological nature or the skills of the operating surgeon. Expected adverse events can be labeled as side effects or adverse effects associated with procedure however, an unexpected catastrophy causing mortality should be labeled as disaster. We herein report such a disaster that occurred intraoperatively for a acoustic schwannoma via retrosigmoid approach in supine position. The nightmare faced by the operating team is described for others to learn and keep such complication in mind.

A 36 yr female presented with left sensorineural deafness and gait swaying for 6 months duration. On examination papilledema was present. MRI revealed a left cerebellopontine region tumour of size around 6 x 4 cm with mild distortion of 4th ventricle. There was no ventriculomegaly/periventricular lucencies. She was planned for elective surgical procedure.

After general anaesthesia the patient was placed in supine position with head fixed in sugita head clamp with head at a higher level than chest. A lazy - S- shaped incision 2 cm behind the mastoid was made. A craniotomy measuring 3.5x3.5 was performed. A C- shaped dural incision was given 1 cm posterior to the sigmoid sinus. Cerebellum was tense on dural opening. CSF from the lateral medullary cisterns was released ,the cerebellum was lax. Cerebellum was retracted with leyla retractor system and tumor visualized. Subarachnoid dissection done and tumor exposed. After opening the capsule the tumor was decompressed in an orderly fashion, decompressing the centre followed by lower pole and medially. After adequate decompression tumor mobilization from the brainstem was attempted. The retractor was released for readjustment. On removing the retractor blade there was a massive bulge of the cerebellum pouting out of the dural opening. This event was accompanied with fall in BP and pulse rate. The head position,airways were rechecked for normalcy. Dural opening was extended posteriorly and bulging cerebellar hemisphere was excised. Inotropic support with dopamine ,nor adrenaline was instituted. The cerebellum was retracted to look for any source of bleeding from within or around the tumour. The search was negative. Even after decompression of the bulging cerebellar hemisphere the blood pressure remained at 60/30 on inotropes. The cerebellum continued to bulge abeit slowly than the previous episode. This time the bulging of the tentorium down with forceful pulsations were noted. We thought of a hydrocephalus and attempted tapping the left frontal horn after making burr hole at kocher's point. On opening of the dura there was initial jetting out of subdural CSF followed by fresh blood clot ejecting out. Tapping the ventricle did not yield any CSF. We immediately closed RMSOC incision and shifted the patient for CTscan. CTscan showed a large posterior frontal intraparenchymal bleed with a 2cm thick left acute subdural hematoma in the fronto parieto temporal region with 2cm midline shift and uncal herniation. Basal cisterns were obliterated. Patient was immediately shifted back to the operation theatre, a left FTP decompression craniotomy, evacuation of the SDH and intraparenchymal haematoma with coagulation of the bridging venous bleed was performed. As the brain bulge was massive, bone flap was preserved in pareties. Dural closure was achieved by placement of dural substitute and single

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layered closure as the haemodynamic parameters were deteriorating. Patient was shifted to ICU on ventilator and inotropic support. Patient was remained E1V1M1 pupils dilated and fixed for 2 days and expired.

Discussion

Distant site spontaneous hematomas in various locations cranial surgeries are well known events in neurosurgical practice[1,2,3]. But posterior fossa surgery causing supratentorial SDH is rare [2,4,6,]. These instances may be detected in postoperative CT scans done as a routine [3,5,9]. But intraoperative massive SDH causing the kind of nightmare the authors faced as described above is a rare event [7,8]. To think of such a rare complication in the midst of melee created by the unrelenting cerebellar bulge and falling pressures is difficult. In hindsight the authors think that the bulging of the tent visualized after cerebellar resection and the forceful pulsations are probable indicators of such a catastrophe.

Intraoperative or post operative distant site haematomas are rare fatal entities with only few cases reported in the literature[3,8,9]. Rapid release of CSF from the cistern magna causing abrupt fall of intracranial pressure and snapping of bridging veins remains the most accepted reasons for formation of supratentorial bleed during any infratentorial surgeries[2,3,10]. Hence intraoperative cerebellar bulge which is in collaboration with unresponsive vital parameters should make us vigilant regarding this rare fatal entity .A immediate CT scan is advised to pick up this enigmatic condition for a prompt and immediate action.

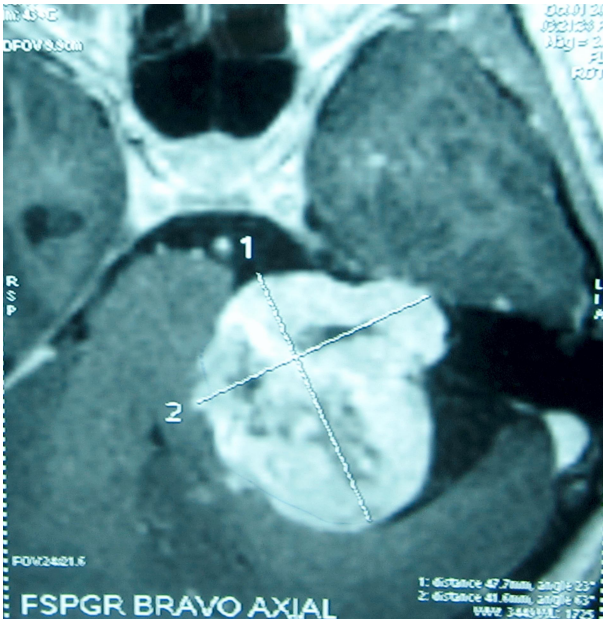

Fig. 1: Pre operative MRI T2WI showing well defined extraaxial cerebellopontine angle tumour with significant brainstem compression

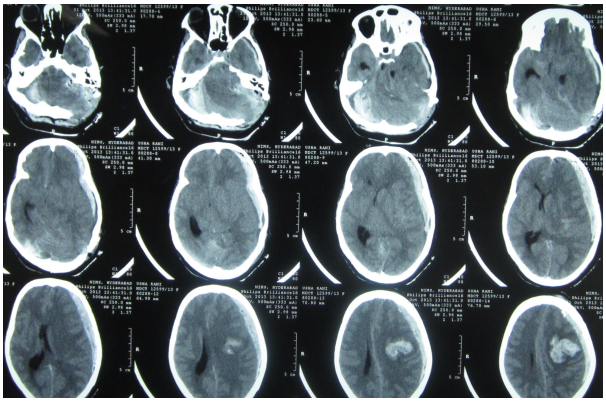

Fig. 2: Post operative CT scan Image showing subdural collection supratentorially with mass effect and midline shift following Retromastoid suboccipital craniectomy surgery for cerebellopontine tumour

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