

## CASE REPORT

### A Rare Case of Anaplastic Astrocytoma of Corpus Callosum with Intraventricular Extension

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**Keywords :** High Grade Astrocytoma, Corpus Callosum Glioma, Intraventricular Tumour

#### ABSTRACT

**Introduction:-** Though gliomas are the most frequent primary neoplasm in brain, only 3.8% infiltrate white matter structures like corpus callosum. Corpus callosum involvement based on preoperative imaging is an unfavorable prognostic factor for survival among the subgroup of young, good-performance-status patients with high-grade astrocytoma.

**Methodology:-** 28 year lady was brought with history of left sided weakness and headache since 1 month and history of convulsion 1 day back. Mri brain with contrast showed ill defined, cystic lesion arising from body of corpus callosum of size 70\*62\*54 mm. Patient was operated for right frontal craniotomy and excision of corpus callosal lesion with intraventricular extension and histopathology was anaplastic astrocytoma (who grade 3). Post operatively patient headache and improved power.

**Conclusion:-** Gliomas of corpus callosum have aggressive behaviour, surgical complications and recurrence. If treated properly these patients can have better postoperative outcome and prolonged survival.

#### INTRODUCTION

Gliomas are the most frequent primary neoplasm in the central nervous system. Of these only 3.8% infiltrate white matter structures corresponding to the corpus callosum. Corpus callosum involvement based on preoperative imaging is an unfavorable prognostic factor for survival among the subgroup of young, good-performance-status patients with high-grade astrocytoma. Natural evolution of corpus callosum gliomas determines a progressive neurological deterioration in a short period of time leaving a severely neurological affection, and a death afterwards in short time. Aggressive therapy prolongs the survival for this patient with a high risk of neurological deficit.

High grade gliomas most commonly spreads via direct extension along white matter tracts, including the corpus callosum; hematogenous, sub ependymal, and cerebrospinal fluid spread also occurs. As in the present case, because the corpus callosum is relatively resistant to infiltration, high grade glioma should be considered whenever any lesion crossing the corpus callosum is encountered.

The risk of neurological deficit leads, in many cases, to take a conservative behavior such as stereotactic biopsy

with chemo radiotherapy. In the last years advances in microsurgical techniques has bring a new perspective on aggressive treatment in particular cases. Poor prognosis and general neurological affection is still the main problem. In this presentation we demonstrated our experience of managing a case of anaplastic astrocytoma involving corpus callosum with intraventricular extension successfully without any postoperative complications.

#### CASE REPORT

28 Year Lady Was Brought To OPD with H/o Left Sided Weakness Since 1 Month Headache Since One Month In Frontal Region Abnormal Purposeless Body Movement Followed By Unconsciousness For 15 Minutes/ 2 Days Back (s/o) GtCS

2 Episodes Of Vomiting 1 Day Back.

She Had History Of Convulsions 2 Years Back And Diagnosed As A Case Of Corpus Callosal Sol At That Time. She Was Started Anticonvulsants (Ilevera And Valproate) And Adviced Surgery, But Patient Was Not Ready For Surgery Due To Economic Reasons.

On Clinical Examination: She Was Conscious, Oriented, Obeying Command And Vitally Stable.

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On Neurological Examination:

Higher Functions Were Normal

Cranial Nerves Were Normal.

Vision, Light Reaction, Eye Movements Were Normal.

Left Sided Hemiparesis Present With Power 3 In Both Upper And Lower Limbs.

Left Sided Hypertonia And Hyperreflexia Present.

Sensory Examination Was Normal And Cerebellar Examination Was Unremarkable.

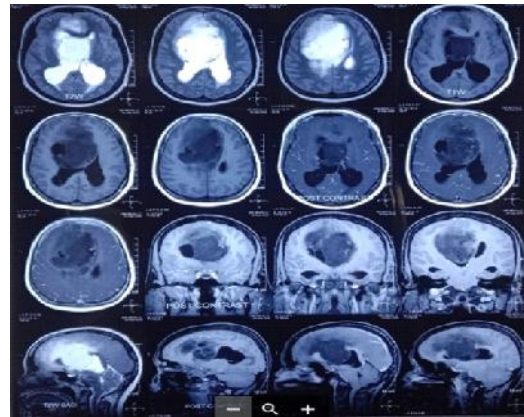
**Mri Brain With Contrast** Was Done S/o Ill Defined, Cystic Lesion Is Seen Arising From Body Of Corpus Callosum Of Size Apprx 70\*62\*54 Mm.

Lesion Was Heterogenously Hyperintense On T2w, Hypointense On T1w And Flair, And Showing Mass Effect In The Form Of Subfalcine Herniation With 22mm Midline Shift To Left And Compression Over Midbrain And Pons.

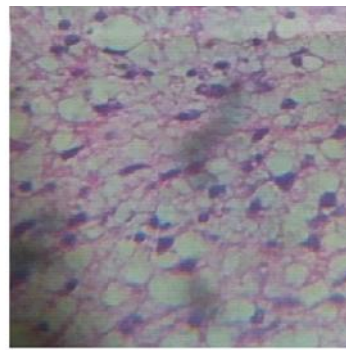
Superiorly Extending Into Right Frontal Lobe With Perilesional Edema. Inferiorly Lesion Bulging And Extending To Frontal Horn And Body Right Lateral Ventricle With Obliteration Of Foramen Of Monro And Third Ventricle.

### PRE OPERATIVE MRI

- After All Necessary Pre Operative Work Up Surgery Was Planned.
- Patient Was Operated For Right Frontal Craniotomy And Excision Of Corpus Callosal Sol With Intraventricular Extension Under Ga. Procedure Was Uneventful.
- Hpr Came Out To Anaplastic Astrocytoma (who Grade 3).
- Post Operative Patient Improved. She Relieved Headache And Improved Power From 3 To 4+. There Was No Evidence Of Dissociation Syndrome,



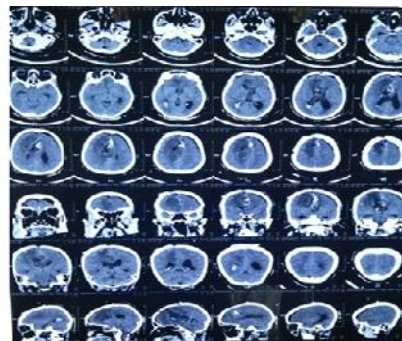
INTRAOPERATIVE PHOTOGRAPH



HISTOPATHOLOGY



POST OPERATIVE PHOTOGRAPH



POSTOPERATIVE CT SCAN

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Memory Impairment Due To Fornix Injury, Hypothalamic Dysfunction Or Hydrocephalus Postoperatively.

- There Is Plan To Give Chemotherapy And Radiotherapy In This Patient.

### DISCUSSION

- M g Yasargil published a series of cases evaluating corpus callosum lesions, encountering that the most frequent type of lesion correspond to high grade of gliomas. Gliomas are the most common type of malignant primary brain tumor, yet they currently have no effective treatment. Involvement of corpus callosum is not an uncommon phenomenon, because the high grade gliomas can infiltrate the other hemisphere via the connecting fibers, finally developing into a butterfly glioma. Convulsions, neurological deficit, disconnection syndrome are the clinical presentations in these tumors.
- In our case patient was 28 year female patient presented with convulsions and hemiparesis(power 3 in upper and lower limbs). Patients memory and intelligence was normal.
- Despite aggressive first-line therapy, consisting of surgery, radiation therapy, and adjuvant chemotherapy, high grade glioma in this region have traditionally poor prognosis due to postoperative complications like bleeding, infection, postop convulsions, disconnection syndrome and there is chance of recurrence. But in our case, patient has been recovered well after surgery without any surgical complications.

### CONCLUSION

Though gliomas are the commonest intracranial malignant tumors, anaplastic astrocytoma involving corpus callosum is considered poor prognostic indicator due to aggressive behaviour, surgical complications and recurrence. If treated properly these patients can have better postoperative outcome and prolonged survival.

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