



Case Study

BRAIN TUMOR WITH PREGNANCY A RARE ENTITY

Ruchi Sinha¹, Ravishankar Prasad²

¹Department of Obstetrics & Gynaecology, Institute of Medical Sciences Varanasi-221005, India

²Department of NeuroSurgery, Institute of Medical Sciences Varanasi-221005, India

Correspondence should be addressed to **Ravishankar Prasad**

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ABSTRACT

A case of brain tumor with pregnancy in third trimester is reported. The literature is reviewed to show the effect of pregnancy on these tumors, the method of diagnosis and management. The presence of a brain tumor in pregnancy is a state of a diagnosis of scarce presentation in the medical practice. A high clinical suspicion on the part of the obstetrician is the key to timely diagnosis; as the symptoms of headache, vomiting and blurred vision are often encountered in pregnancy with or without pre-eclampsia.

KEY WORDS: Brain tumor, glioma, astrocytoma

INTRODUCTION

The brain tumor with pregnancy is a rare entity. About 75% of the brain tumors occurring in female of reproductive age group initially manifest during pregnancy (M Clure 1978). (1) Since the symptoms of increased intracranial pressure are similar to the symptoms of morning sickness evaluation can be challenging. The situation constitutes a conflict for the individual management of both conditions and creates a special state in which the maternal and fetal lives are under imminent damage. The therapeutic attitudes depend on several elements such as the time of pregnancy, the patient's general and neurological state and the histology of the tumor.

CASE REPORT

A 25yrs old G2P1+0 was admitted at 26wks+6days with severe headache, vomiting and dizziness for 3 months. On Examination the patient's vitals were stable. She was disoriented with Glasgow coma scale E4V4M6. Her pupils were normal size and reactive to light. Cerebellar signs were

positive. Patient was ataxic and had severe titubation. On per abdominal examination; fundal height corresponded to 26 weeks of gestation. The fetus was cephalic. Uterus was relaxed and fetal heart rate was 132beats/min and regular. The patient was investigated. CT scan of head revealed Right cerebellar hemisphere space occupying lesion (SOL) of 61 × 52 mms with hydrocephalous. Her abdominal sonography showed 26weeks+1day live intrauterine pregnancy. The patient was operated in view of severe neurological symptoms. Sub occipital craniectomy with tumor decompression was done and shunt was placed. The post-operative period was uneventful. The patient was put on steroids. The histopathology of the tumor mass showed high grade astrocytoma. As the patient was then neurologically stable and the fetus was immature, pregnancy was carefully followed after taking patient's consent. She went in spontaneous labour at 36weeks+4days of gestation. Her first stage was uneventful. The second stage was curtailed by applying forceps. A female baby of 2160 gms was delivered vaginally. Baby was kept in NICU for respiratory distress

due to TTN. Baby was handed over after 24 hrs. The patient received radiotherapy thereafter.

DISCUSSION

The incidence of all cancer during pregnancy is estimated to be between 0.07 and 0.1%. (2) Approximately 1 in 44,000 pregnancies is complicated by the diagnosis of a maternal brain tumor. (3) Classification of brain tumour is determined by their histopathological features (WHO 2000). The relative frequency of different primary brain tumor types is not changed by pregnancy with 85% of such tumors consisting of gliomas, meningiomas, pituitary tumors and vestibular schwannomas. (4, 5) Glial tumours are the most common primary brain tumors of adults, constituting about 35% of all intracranial tumours. (6) It has been suggested that hormonal changes of pregnancy may play a role in causing gliomas or have a direct effect on tumor growth (7), but no experimental evidence has been provided to support this assertion. However, the tendency to retain the extra and intracellular fluid during pregnancy is considered a predisposing factor for the development of extensive perineoplastic brain edema and, hence, more severe symptoms (8,9). Glial tumors include different histological types, such as oligodendrogliomas, ependymomas, and astrocytomas, and different grades of malignancy, pilocytic astrocytomas to the very malignant glioblastomas multiforme. Most frequent is astrocytoma. Since the symptoms of increased intracranial pressure including headache upon awakening, nausea and vomiting are similar to the symptoms of morning sickness of pregnancy evaluation can be challenging. Treatment of brain tumors or their complications may be necessary during pregnancy. Surgical resection and decompression should be performed as soon as possible if the tumour is large, causing progressive symptoms, or surrounded by oedema that is causing considerable mass effect or increased intracranial pressure (ICP). The method of delivery for a pregnant woman with a brain tumor remains controversial. Perhaps the most important factor is the presence and severity of increased intracranial pressure. During labor uterine contractions do not typically increase ICP in the mother although abdominal pressure in the second stage of labor does significantly elevate ICP. (3) One authority has suggested that the decision whether to perform a cesarean section should be based on obstetric reasons alone and that if there is unusual concern about intracranial hypertension a forceps delivery is indicated to avoid the second stage of labor. (3,10) However, caesarean section is usually recommended in the presence of increased ICP although other maternal and fetal factors such as parity, neurological condition of the mother, location and grade of tumor, position and health of the fetus are important in making this decision. (5)

Figure 1: CT Scan showing tumor mass



CONCLUSION

The brain tumor with pregnancy is a rare event and diagnosis can easily be missed. A high index of suspicion on the part of the obstetrician is a key to timely diagnosis. In most cases, pregnancy may be allowed to continue under close supervision until the baby is reasonably mature. Labor may be induced in suitable cases, and the baby should be delivered by elective forceps as soon as the second stage of labor is reached to cut down maternal bearing-down efforts.

CONSENT

The authors confirm that informed written consent was received from the patient for publication of the manuscript and figures.

COMPETING INTERESTS

The authors declare that they have no competing interests.

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