Incidental Central Pontine Myelinolysis in Pregnancy.

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Literature Review:-

Central pontine myelinolysis (CPM) is a rare neurological condition. In pregnancy, it is usually results as a complication of hyperemesis in pregnancy(1).

CPM has also been reported as a complication in few pregnancies where tocolysis is used in preterm labour conditions, with evidence for the same outlined below.

Osmotic demyelination syndrome (OSD) diagnosed on MRI due to spastic gait and ataxia developed post-Cesarean delivery after tocolysis with magnesium sulphate for preterm labour (2).

Central Pontine myelinolysis (CPM) diagnosed in second-trimester twin pregnancy post hyponatremia due to atosiban tocolysis (3).

Background:-

CPM is a rare demyelinating neurological disorder of Pons, also known as OSD, occurs in most cases due to rapid sodium correction in chronic hyponatremic conditions. It is associated with poor prognosis, with management being largely supportive, if therapeutic interventions are not rapidly initiated to reverse the etiology. Its occurrence in pregnancy is seen in association with patients with hyperemesis.

Aim:-

We present a rare case of Central Pontine myelinolysis, a rare neurological condition in pregnancy. Adding to its rarity in incidence, this case also had uncommon presenting symptoms of headache unlike corticospinal or corticobulbar symptoms known for the condition, making evaluation and management challenging.

Case:-

Retrospective case analysis of an 18-year-old G2P0, with a history of previous FDIU at 16 weeks and background history of recurrent UTIs, who presented at 34 weeks gestation with a throbbing headache, nausea and mild photophobia was done. Headache refractory to opiod analgesia was investigated by the Neurology team to rule out cerebral venous thrombosis. Interestingly, MRI revealed an incidental finding of pontine osmotic demyelination or infarction which prompted extensive multidisciplinary team involvement (MDT). MDT attempted to rule out various metabolic, biochemical, inflammatory and other likely causes for CPM which were negative. The ongoing headache continued with other obstetric and medical issues like episodes of SVT, decreased fetal movements, threatened preterm labor, oligohydramnios and premature rupture of membranes (PPROM) at 35 weeks which warranted referral to a higher tertiary centre for optimal delivery planning and further management. She progressed to vaginal birth at 36 weeks and had an uneventful postnatal recovery. Her immediate postpartum MRI showed persistent CPM changes which surprisingly resolved in follow up MRI in 3 months with the patient continuing to have ongoing likely chronic migraine headache.

Result:-

Complex management of rare medical condition along with obstetric complications.

Discussion:-

CPM causes significant morbidity and mortality. Active therapeutic interventions initiated rapidly can have positive impact on recovery and overall prognosis. (4)

CPM in pregnancy so far have been reported mostly in association with fluid correction etiologies and individuals were symptomatic for CPM. Management was driven by correction of causative pathology in such cases.

Our case was rare, as the patient was asymptomatic for the incidental diagnosis of CPM and was further challenged with the management of additional obstetric and medical issues while taking utmost care not to aggravate CPM due to its critical known irreversible prognosis.

Conclusion:-

Antenatal diagnosis of radiological evidence for potentially irreversible and possibly fatal condition of CPM in asymptomatic patients needs utmost vigilance with multidisciplinary management in tertiary centre to optimize outcomes and to tackle potential complications which could arise or aggravate CPM with fluid shifts intra or post partum.

It is a significant challenge to intervene and prevent progression of CPM when etiology is unknown. No other obvious symptoms and/or signs for CPM and spontaneous post partum resolution raises probability of the incidence being sporadic or possibly due to immunological changes in pregnancy.

We could probably also conclude CPM to have sporadic occurrence and resolution. This enigmatic finding would benefit from further research studies on similar cases.

References:-

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