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A Case of Cerebral Venous Thrombosis with Retained Placenta Increta after Spontaneous Abortion

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ABSTRACT

Cerebral venous thrombosis is a rare disease. It mostly presents with headache that progresses slowly (95%) with or without diplopia. MRI with MRV is the most sensitive method to diagnose dural venous sinuses and cerebral vein thrombosis. While managing these cases, care should be taken to avoid increase in ICP and anticoagulant to be restarted as soon as possible.

Keywords: Cerebral Venous Thrombosis, Placenta Increta, MRI Venogram, General Anaesthesia.

INTRODUCTION

Cerebral venous thrombosis is a rare cause of cerebral infarction but it is very important consideration because of potential morbidity associated with it. It can present with a variety of symptoms which include headache, diplopia, nausea, vomiting, seizures and focal neurological deficits. Various predisposing factors include pregnancy (usually last trimester), puerperium, thrombophilias, dehydration, oral contraceptives, substance abuse, head trauma etc.

CVT cases have also been reported to occur after spinal anesthesia. We hereby discuss a case of spontaneous abortion followed by cerebral venous thrombosis posted for hysterectomy which was successfully managed under general anesthesia.

CASE REPORT

A 27 year female presented in the emergency with bleeding per vaginum for 2 days. She had undergone suction and evacuation twice for retained product of placenta following spontaneous abortion. There was history of two previous caesarean sections. Ultrasound abdomen revealed retained placental tissue with surrounding hematoma. MRI pelvis was suggestive of ? retained placenta increta into lower anterior myometrium with intact serosa. Patient was planned for laparotomy for subtotal abdominal hysterectomy. During the preanaesthetic checkup, patient complained of blurring of vision and diplopia for past few days which was sudden in onset and painless. Patient also gave history of low grade fever since one and half month and history of headache along with nausea and vomiting since one month. There was no history of seizure and any focal neurological deficit. All investigations were within normal range except Hb 7.9g/dl. On ophthalmic examination, bilateral papillodema, decreased vision left more than right and sixth nerve palsy was noted suggestive of increased intracranial pressure. MRI brain was advised by neurologist, which was within normal limits. MR venogram was done which showed thrombosis of left sigmoid and transverse sinuses with normal cerebral hemisphere, posterior fossa and brain stem. As there was no active bleeding, injection enoxaparin 60 mg twice a day along with mannitol 100cc thrice daily was started by neurologist. Patient was strictly observed for any bleeding and on 6th day hysterectomy was planned . Enoxaparin was stopped one day prior to surgery. Preoperative Hb was 5g/dl, PC 3 lacs, PT 14.2, INR 1.20, APTT 39.6 with a control of 38.9 .Night before surgery maintenance intravenous fluid was started. On the day of surgery in the operating room after confirming NPO status, all routine monitors including non invasive blood pressure, pulse oximetry, $EtCO_2$ and electrocardiogram were attached. Two large bore intravenous lines were

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secured. Patient was premedicated with injection glycopyrrolate 0.2mg and injection fentanyl 120 µg. after preoxygenation with 100% oxygen patient was induced with injection thiopentone 200mg. Check ventilation was done and injection vecuronium 5 mg was given. After gentle laryngoscopy and topical lignocaine spray over the vocal cords trachea was intubated using 7.5 mm cuffed endotracheal tube. Maintenance was done with oxygen, nitrous oxide and isoflurane, supplemented with intravenous propofol infusion. Intraoperative and postoperative period was uneventful. All measures were taken to avoid rise in intracranial pressure. Injection enoxaparin 60mg once daily was started 12 hours postoperatively. A repeat scan was done after three weeks which revealed partial thrombosis of left transverse and sigmoid sinuses suggestive of recanalisation changes.

DISCUSSION

Cerebral venous thrombosis is a rare condition with Variable but at time life threatening complications. It is more common in females with ratio of 3:1. This is due to the association of CVT with pregnancy, puerperium and oral contraceptives.[1] As per thedata of the international study on cerebral vein and dural sinus thrombosis , transverse sinus (86%) is the most commonly affected site followed by superior sagittal sinus (62%) and straight sinus (18%), and most of the time more than one site is affected.[2] It mostly presents with headache that progresses slowly(95%) with or without diplopia due to sixth nervepalsy as a result of raised intracranial pressure. It may also present as focal seizures (47%), or paresis which may be unilateral or bilateral (43%) and papilledema (41%). Severe papilledema can cause visual impairments which is transient initially but if not treated timely the vision loss may be permanent.[3] On an average there is delay of one week from the onset of symptoms to make the diagnosis.[2] MRI with MRV is the most sensitive method to diagnose dural venous sinuses and cerebral vein thrombosis. Thrombus will appear hyperintense signal on T 1-weighted and T 2-weighted MRI. As the characteristics of the signalchanges with the age of the thrombus and appears isointense on T 1-weighted images initial 4-5 days and after one month, that could be the cause it was not picked on MRI. In the acute phase, the priority is to stabilize the patient's condition by preventing further increase in intracranial pressure. So, mannitol was administered in our case. Some patients may require surgery for removal of the hemorrhagic infarct, or decompressive craniotomy. As per the STROKE journal recommendation for treatment of CVT, anticoagulation with unfractionated heparin or LMWH is started initially, shifted later on to oral vitamin K antagonists. There was a controversy regarding the use of anticoagulant because venous infarct may become hemorrhagic. But now a days, treatment with heparin is started as soon as the diagnosis is confirmed, even in the presence of hemorrhagic infarcts.[2] CVT patients have usually been managed by general anaesthesia (GA).[4] While deciding for anaesthesia in a case of CVT on anticoagulant, GA is preferred as there is risk of spinal hematoma. Also cases of CVT have been reported after spinal anaesthesia as a result of dehydration and hypotension.[5] In general anaesthesia, care should be taken to avoid increase in ICP and anticoagulant to be restarted as soon as possible. Patient with history of dural venous thrombosis are at increased risk of thrombotic events in future pregnancy although it is not a contradiction for future pregnancy. As advised by American heart association/ American stroke association, Patient should be investigated regarding the underlying cause and prophylaxis with LMWH during future pregnancies and in the postpartum period is also recommended.[6]

CONCLUSION

Cerebral venous thrombosis can have varied presentation that makes its diagnosis very difficult and challenging. Once diagnosed, treatment should be started early to prevent increase in thrombus size and its complications. General anaesthesia is a safer technique to decrease the risk of bleeding complications provided due care is taken to prevent rise in ICP.

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