

Case report

CMC with Pregnancy - A case report

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Abstract :

A 41 years old lady was admitted in KYAMCH with the diagnosis of RHD - MS(severe), with Pulmonary Hypertension with Heart Failure with 26 wks pregnancy. To continue upto full term, she underwent CMC Operation that was very challenging from anaesthetic point of view to prevent harm for both the fetus & mother. Single lung ventilation (Rt) was done for anaesthesia.

Key Words : CMC, ICU, Tubb's, RHD, MS, Anaesthesia, Pregnancy, Obstetrics.

Introduction: Anaesthesia for CMC operation is a high risk for the patient, requires knowledge of cardiac anaesthesia along with expertise and skill in management of single lung ventilation, intra-operative invasive, non-invasive monitoring. The patient was pregnant which increases risk for both the patient and fetus. MS patient has highly restricted cardiac output, so there is every chance of hypotension, hypoxia, arrhythmias. Perioperatively the patient may develop left heart failure. Anaesthetic consideration include maternal safety, fetal well being and continuation of pregnancy. With regard to fetal well being, avoidance of teratogenic agents are important. Anaesthesia should comprise a balanced technique aimed at maintaining cardiovascular stability. Cardiac parameter in the pregnant patient differs from that in a non pregnant patient. Total blood volume increases by 45% in the third trimester. Significant cardiovascular haemodynamic changes occur throughout pregnancy. Patient with MS with pregnancy should be well oxygenated. Close attention to fluid balance is mandatory. Patient with high risk Cardiovascular disease do not tolerate anemia, Hb% should be around 10gm/dL. effective perioperative analgesia is essential. Increased stress increases sympathetic stimulation causing increased cardiac activity and oxygen demand. MS with tachycardia decreases diastolic filling and decreased cardiac output. A team approach with anaesthesiologist, surgeon, obstetrician, cardiologist is critical for optimal care of mother and fetus in these situations.

Case report :

Mrs. Babita, 41 yrs lady, weighing 38 kg, admitted as a diagnosed case of RHD with MS (severe) with Heart failure with 26 wks pregnancy. She needed correction of failure, then she underwent surgery, CMC. Before operation patient was stabilized with conservative management by Cardiologist in CCU. Consultation was taken from Obstetrician. Normal pre-term termination was not possible at 26 weeks due to severe MS.

Pre-operative Evaluation CMC with pregnancy is a high risk patient. The patient needed thorough evaluation of cardiac and non cardiac parameters.

CBCESR, Urea, Creatinine, S. electrolytes, FBS, Thyroid function test, Liver function test, CXR P/A view, HBs Ag, VDRL, HIV, Blood group, ECG, Colour Doppler Echo study, CRP, BT, CT, USG of lower abdomen for Pregnancy profile.

Pre medication: Midazolam 7.5mg pre medication was given at night before operation & in the morning.

Anaesthesia Procedure : The patient was operated on 01.04.10. Patient was taken in the OT and pre oxygenated. After establishing non-invasive monitoring lines, invasive CV line & Right radial artery lines for continuous CVP & IBP monitoring were established. Induction with Fentanyl 50mg, Thiopental Sodium - 150mg & suxamethonium & double lumen endobronchial (ROBERT -SHAW) left tube insertion. Vecuronium was used as the Neuromuscular blocker. Lung was mechanically ventilated with a mixture of O₂, N₂O and Isoflurane. Patient was positioned in right lateral position. 5000 IU heparin was given. To maintain BP, Inj. Calcium gluconate, Dopamine support were needed. Patient was extubated on table and transferred to ICU in stable condition without support.

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Operative Procedure: Left anterolateral thoracotomy done. Close mitral commisurotomy done by Tubb's Dilator upto 3.5 cm.

Outcome: After full recovery in ICU, ultrasonogram showed normal fetal movement - an alive fetus in uterus. No sign of cardiac failure and patient was discharged from the hospital with advice of cardiac and obst. department for further follow up.

Conclusion:

CMC with pregnancy is a highrisk operative condition both for the mother and fetus. Expert team and facilities needed to overcome any mishaps of the operation. Careful pre-operative evaluation, per-operative proper monitoring and post operative care gives the safe outcome of the patient.

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