Utilizing cardiac MRI in a ST elevation myocardial infarction (STEMI) mimic for clinical decision making in pregnancy: A case report

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ABSTRACT

Introduction: Direct access to percutaneous coronary intervention (PCI) in ST elevation myocardial infarction (STEMI) in pregnancy will improve indirect maternal death statistics. However, the direction of treatment is challenging when no coronary abnormality is present. We reported a case of STEMI mimics who benefited from a cardiac MRI (CMRI) and discussed its role in pregnancy. **Case Description:** A 32-year-old, G2P1 at 12 weeks gestation was rushed to the cardiac catheterization laboratory for acute chest pain, with STEMI changes on ECG, and Troponin I >10,000 ng/L. She was admitted earlier for hyperemesis gravidarum, transaminitis, and a T4 level of 58 pmol/L. The cardiac angiogram was normal. Her cardiac function deteriorated with an ejection fraction of 15%, and elevated transaminitis. Her condition worsened, and a CMRI showed acute fulminant myocarditis. She received methylprednisolone, immunoglobulin, anti-failure medication, and plasmapheresis. Unfortunately, her cardiac function did not improve, which necessitated the termination of pregnancy (TOP). Her biochemical markers remarkably improved following the TOP. Repeated CMRI one week later showed improvement in cardiac function. Implanon was subsequently inserted for contraception. **Discussion:** Myocarditis is a rare condition that mimics the clinical features of myocardial infarction. A definitive diagnosis during pregnancy is challenging as it involves a myocardial cardiac biopsy. In our case, CMRI played a crucial role in providing a timely diagnosis through a non-invasive method. CMRI provides comprehensive information about the heart, including the inflammatory changes, and temporal myocardial tissue injury changes during and after diagnosis. CMRI should be considered in complex cardiac cases during pregnancy.

Primary myeloproliferative neoplasm in pregnancy: Maternal and fetal outcomes. A case report.

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ABSTRACT

Introduction: Primary myeloproliferative disorder or myeloproliferative neoplasm (MPN) is a group of blood cancers in which the bone marrow overproduces one/more types of blood cells. Pregnancy in the context of MPN is rare and poses significant challenges. **Case Description:** A 37-year-old Gravida 3 para 1+1 at 18 weeks diagnosed with MPN just before her 3rd pregnancy. Her first pregnancy was uneventful. She had a complete spontaneous first-trimester miscarriage at 8 weeks four years later and it was noted that her platelet counts ranged from 900-1100 x 109/L and white cells ranged from 15-54 x 10^9/l. Her full blood pictures (FBP) was noted to have thrombocytosis with leukocytosis. Bone marrow trephine biopsy was performed and confirmed as MPN. She was positive for ……(CALRL) mutation and had no history of thrombotic events. She was started on low-dose aspirin and Low Molecular Weight Heparin (LMWH) A decision to commence cytoreduction was made after lengthy counselling during the multidisciplinary meeting as there was progressive and persistent leukocytosis and extreme thrombocytosis. Interferon (IFN) was started from 22 weeks, 180 mcg weekly until 34 weeks. Her platelet level was normalized with a marked reduction of her leukocytosis. She had a vaginal delivery of a healthy baby of 2.7 kg following induction at 36 weeks gestation. **Discussion:** Existing knowledge on the management of MPN in pregnancy and its outcome remains ed variable due to its rarity. The use of aspirin, LMWH, and INF must be cautiously undertaken after Multidisciplanary Treament (MDT) discussion with careful risk and benefit evaluation. Additionally, the optimal timing of treatment, dose, and schedule of cytoreductive treatment warrants further research.