Management of pregnancy and delivery of a parturient with coronary artery disease and drug eluting stent

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INTRODUCTION

Coronary artery disease in pregnancy is uncommon and the incidence of myocardial infarction is estimated at 0.01%. This represents a leading cause of indirect mortality in the UK. The recent advances in cardiological management further influences shared decision making. The salient challenges faced are highlighted.

CASE REPORT

A 34 year old woman presented for an elective lower segment caesarean section at 37 weeks of gestation. She had suffered an acute inferior myocardial infarction in early pregnancy and underwent a percutaneous coronary intervention (PCI) with insertion of two drug eluting stents (DES) to her right coronary artery. Following this, she was commenced on antiplatelet therapy with aspirin and prasugrel. Her other comorbidities included diabetes mellitus, depression and obesity. She was symptom free during pregnancy and her echocardiogram showed good left ventricular function. Prasugrel was stopped seven days before a planned caesarean section as per cardiology advice. Aspirin and prophylactic dose of enoxaparin were stopped the day before surgery to facilitate safe conduct of neuraxial blockade . Spinal anaesthesia was administered with 12.5 milligram of hyperbaric bupivacaine and 300 microgram of Diamorphine. An infusion of phenylephrine was used to maintain hemodynamic stability. Aspirin, prasugrel and enoxaparin were restarted after surgery. This resulted in a good maternal and foetal outcome.

DISCUSSION

The development of coronary stenting coupled with adjunctive antiplatelet therapy is increasingly used as a treatment modality for coronary artery disease.[1] DES pose a thrombotic risk which necessitates the use of antiplatelet medications. Aspirin and newer thienopyridines such as prasugrel were selected due to a safer pharmacodynamic profile.[2] A multi-disciplinary consensus was sought regarding the timing of surgery and discontinuation of antiplatelet medications which factored in haemorrhagic and thrombotic risks. The risk of major blood loss due to prasugrel outweighed the risk of possible stent thrombosis and it was therefore discontinued seven days before surgery. Aspirin was continued until 24 hours before surgery to confer protection against stent thrombosis. Caesarean section as a mode of delivery was suggested as it circumvents the increased myocardial demand due to peripartum workload.

REFERENCES

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