

Acute Myocardial Infarction in association with Major postpartum haemorrhage: a case report.

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Abstract

Objective

- ▶ To present a rare case of myocardial infarction(MI) in association with major postpartum haemorrhage(PPH).

Case Report

A 35-year-old low risk, para two lady presented at 39 weeks with Spontaneous rupture of membranes (SROM) and irregular tightening. She had a BMI 36.9 and was booked for her third Caesarean section(CS). A Category 3 CS was performed with a 1100ml blood loss intraoperatively. During CS, 500microgram/5IU of syntometrine and 1000 microgram misoprostol were given for atonic uterus. In the recovery area, a further blood loss of 500mls ensued. Second dose of syntometrine (500microgram/5IU), Carboprost (250microgram) and tranexamic acid (1Gram) given. As a consequence of the continuing haemorrhage, consent was taken for an examination under anaesthetic (EUA) plus insertion of Bakri balloon. In theatre, haemocue was 67. Two units of blood were transfused and 3 additional doses of Carboprost were given. The final blood loss was 2550 mls.

- ▶ At the end of the procedure, ECG abnormalities (ST elevation) were observed, and an acute coronary event was diagnosed. Urgent angiography was organised which had confirmed severe proximal coronary narrowing improving after administration of Glyceryl trinitrate (GTN). High troponin >3812 ng/l was noted. The patient was transferred to ICU for further investigations and management. She consequently was discharged home after 4 days. Ergometrine and situational coronary spasm causing ischaemic left ventricular (LV dysfunction) was diagnosed as the cause.

Discussion

- ▶ Ergometrine is recommended by the Royal College of Obstetricians and Gynaecologists (RCOG) in second-line pharmacological management of postpartum haemorrhage due to uterine atony. Ergometrine is contraindicated in patients with cardiovascular disease. It is imperative to recognize factors that may predispose myocardial ischemia such as ergometrine administration in the setting of haemorrhage, anaemia, and the intravascular volume depletion, which is apparent in this case. Bateman et al, reported that the administration of an ergot does not significantly increase the risk of acute myocardial infarction, however, this case highlights the continued importance of recognizing the rare occurrence of myocardial ischemia induced by ergometrine when managing anaemia during a postpartum haemorrhage.
- ▶ During management of postpartum haemorrhage, consideration should be given to the risk of cardiac injury as a result of the insult of haemorrhagic shock, Sepsis and administration of ergometrine to control uterine bleeding. Evidence suggests Sepsis and hypovolemic shock induces increased cardiac troponin concentrations.
- ▶ Clinicians must balance this small potential increase in acute Myocardial Infarction that is associated with ergometrine exposure with its proven benefit in the treatment of [uterine atony](#).

Conclusion

- ▶ The management of PPH is a significant and common obstetric emergency. Judicious use of uterotonics is essential along with careful monitoring of the haemodynamic implications of hypotension in patients with significant blood loss.

References

- ▶ Brian T. Bateman, Krista F. Huybrechts, Sonia Hernandez-Diaz, Jun Liu, Jeffrey L. Ecker, Jerry Avorn, Methylergonovine maleate and the risk of myocardial ischemia and infarction, American Journal of Obstetrics and Gynaecology, Volume 209, Issue 5, 2013, Pages 459.e1-459.e13, ISSN 0002-9378, <https://doi.org/10.1016/j.ajog.2013.07.001>.
- ▶ Meng-Han Chou, Ying-Chieh Chen, Kwei-Shuai Hwang, Mu-Hsien Yu, Her-Young Su, Myocardial infarction and ischemic hepatitis complicated by postpartum haemorrhage, Taiwanese Journal of Obstetrics and Gynaecology, Volume 55, Issue 3, 2016, Pages 437-440, ISSN 1028-4559, <https://doi.org/10.1016/j.tjog.2016.04.023>.
- ▶ Bateman BT, Huybrechts KF, Hernandez-Diaz S, Liu J, Ecker JL, Avorn J. Methylergonovine maleate and the risk of myocardial ischemia and infarction. Am J Obstet Gynecol. 2013; 209(459): e1- 13.
- ▶ Stuart P.E, Sandra A.L. Ergometrine for postpartum haemorrhage and associated myocardial ischemia: Two case reports and a review of the literature, Clinical case reports, Vol7, Issue12: p2433-2442