

Ergometrine induced Atrial fibrillation during management of uterine atony – a case report

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Introduction

- Atrial fibrillation is one of the most common arrhythmias in adults.
- It is rare in pregnancy and postpartum though can occur in a background of congenital heart disease or Rheumatic mitral valve disease.
- AF during pregnancy increases the haemodynamic burden over the heart and leads to thrombo-embolic phenomena and heart failure.
- We report a case of atrial fibrillation following Ergometrine in a postpartum mother.

Case History

- 23yr old, primi mother, a known patient with bronchial asthma and thalassemia trait, underwent Emergency LSCS for primary dysfunctional labour.
- Following uncomplicated surgery, due to persistent uterine atony despite of active management of third stage, IV Ergometrine 0.5mg over 3minutes was given.
- Following Ergometrine, she developed persistent tachycardia and hypotension. ECG showed atrial fibrillation with absent p waves in all leads. Troponin I = 19.8 ng/l.
- Echocardiogram revealed EF of 45% to 50% with mild left and right ventricular dysfunction. She was given ICU care and started on IV Amiodarone 300mg bolus followed by an infusion.
- On 2 nd day, EF risen to 60% with remarkable symptom improvement. Metoprolol 12.5mg twice daily started on discontinuation of IV Amiodarone.
- ECG showed sinus rhythm with absence of previous changes. Holter monitoring was normal. Patient was discharged on 4 th day postpartum.
- Follow up echocardiograms showed normal EF, LV systolic and diastolic function.

Discussion

- Atrial Fibrillation is a cardiac arrhythmia that can cause significant morbidity and mortality when occur in pregnancy. Catecholamine excess, haemodynamic stress, atrial ischemia, atrial inflammation, metabolic stress and activation of neuro-humoral cascade are thought to be act as causative factors for occurrence of AF.
- Ergometrine, an ergot analogue used in uterine atony, has a rare complication causing coronary vasospasm & myocardial ischemia. It also can cause paroxysmal AF due to abrupt alteration of autonomic tone as in our case patient.
- Management include rate and rhythm control along with anticoagulation.
- Electrical cardioversion is preferred over pharmacological cardioversion.
- In this case, rhythm control was achieved by Amiodarone and rate control via beta blockers; Metoprolol.
- Anticoagulation achieved with subcutaneous enoxaparin.
- If undetected and not treated promptly it can lead to progressive heart failure and systemic embolic events that leads to morbidity & mortality of the patient.

Conclusion

- Atrial fibrillation during pregnancy is a rare phenomena that causes both morbidity and mortality to the pregnant mother.
- Ergometrine can precipitate AF.
- Rhythm and rate control with anticoagulation is of paramount importance to achieve better patient outcome.