Lightning strikes thrice

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Belfast Health and Social Care Trust

Obstetric Anaesthetists' Association
Promoting the highest standards of anaesthetic practice in the care of mother and baby

Introduction

A case of covid, pancreatitis and peripartum cardiomyopathy in a previously fit and well individual.

Case report

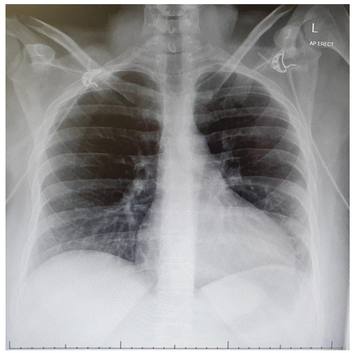
A 24-year-old presents at 37 weeks during her second pregnancy with a five day history of vomiting and abdominal pain. She has no significant past medical history and a previous uncomplicated vaginal delivery.
She required 5L oxygen via nasal specs to maintain her saturations and was commenced on treatment for aspiration pneumonia. Her initial covid antigen test was negative however subsequent PCR was positive.

Admission Bloods

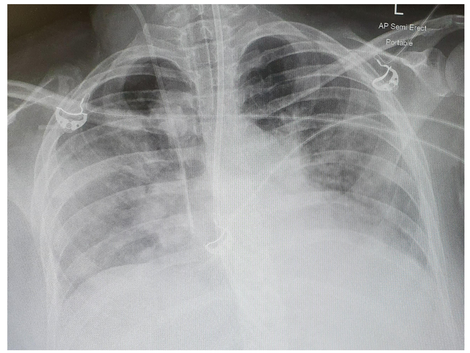
Hb 120	Na 129	pH 7.49
WCC 11.9	K 2.9	BE 5.4
PLT 129	Ur 3.4	Lac 1
CRP 25.8	Cr 139	
Amylase 378	eGFR 52	

Abdominal examination revealed peritonitis with a differential diagnosis of perforated duodenal ulcer, pancreatitis and appendicitis. Following MDT discussion with the general surgical, obstetric and anaesthetic teams a decision was made to proceed with a diagnostic laparotomy. Classical caesarean section was performed at the beginning of the procedure and a healthy baby was delivered. Laparotomy revealed pancreatitis. The abdomen was washed out and closed. No surgical resection required.
Due to high intraoperative oxygen requirements, she was kept intubated and transferred to intensive care post operatively where her condition further deteriorated.

Pre-op CXR



Day 3 CXR



Potential causes for ongoing respiratory deterioration

-> Aspiration pneumonia
-> ARDS secondary to pancreatitis
-> Covid pneumonitis
-> Atelectasis
--> Peripartum cardiomyopathy

Echocardiogram performed on day 3

-> Severe global impairment of LVSF. EF <35%
-> Severely impaired RVSF.

She was commenced on treatment for peripartum cardiomyopathy and her condition started to improve.
Overall, she remained intubated for nine days and was discharged from hospital 16 days following her surgery.
Follow up echocardiogram four months after hospital discharge shows her left ventricular ejection fraction remains <35%.

Discussion

- Covid is increasingly common these days and so it is likely to co-exist with other conditions.
- Acute pancreatitis during pregnancy has an incidence of approximately 1 in 3,000. It in itself presents with diagnostic and management challenges, requiring individualised patient care with a multidisciplinary approach.
- As in this case, peripartum cardiomyopathy commonly occurs in the early post partum period. It has an incidence of 1 in 2,229 in western countries but can be up to 1 in 100 in some parts of Africa. Diagnosis requires a high degree of suspicion and often presents as acute heart failure.

Learning Points

- Expect the unexpected. Rare conditions do occur.
- This case demonstrates how the signs and symptoms of one condition may overlap with another. For example covid and peripartum cardiomyopathy will both cause hypoxia and bilateral CXR changes.
- Peripartum cardiomyopathy is an important diagnosis to establish. Her ejection fraction remains low on follow up which puts her in class IV of the WHO classification for maternal cardiac risk, making her extremely high risk of maternal morbidity and mortality. Having this diagnosis has allowed her to receive the appropriate treatment, follow-up and counselling with regards to future pregnancy.

References

1. O'Heney, JL, Barnett, RE, MacSwan, RM, Rasheed, A. Acute and chronic pancreatitis in pregnancy. *The Obstetrician & Gynaecologist* 2021; 23: 89– 93
2. Regitz-Zagrosek V, Roos-Hesselink JW, Bauersachs J, et al. 2018 ESC Guidelines for the management of cardiovascular diseases during pregnancy. Eur Heart J. 2018;39(34):3165-3241.