OHCA CRISIS

Out-of-hospital Cardiac Arrests **CRISIS** Amidst COVID-19 Pandemic A Perimortem Caesarean Delivery On Maternal COVID-19 Patient

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INTRODUCTION

There is a global surge in out-ofhospital cardiac arrests (OHCA) during the COVID-19 pandemic.

STATISTICS IN MALAYSIA

- 14.5% of total COVID-19 fatalities were attributed to brought-in-dead cases as of May 29.
- 3,396 pregnant women had been infected with COVID-19 since the pandemic in March 2020.
- 70 pregnant women dying from the COVID-19 complications.

Vulnerable groups, including pregnant women have a higher risk of developing COVID-19 complications and maternal collapse outside of healthcare settings.

Perimortem Caesarean delivery (PCD) enhances the likelihood of maternal resuscitation and fetal salvage if it is performed within a narrow time frame.

CASE REPORT

PATIENT'S HISTORY

A 32-year-old refugee lady, Gravida 3, Para 2 at 29 weeks of gestation was found unresponsive at home 50 minutes before her arrival to the hospital. She was having fever, cough, and shortness of breath for one week, however did not seek medical attention. As the ambulance was delayed, she was finally brought to the hospital with the help of a good samaritan. It was unsure at which point she became pulseless, and chest compressions were not initiated until her arrival at the hospital.

Patient was pulseless with asytole and thus resuscitation as per Advanced Cardiac Life Support (ACLS) was commenced The obstetrics team was referred immediately Further history was obtained and a rapid antigen for SARS-COV-2 was positive Initial decision to terminate resuscitation, however the obstetric team made a decision to proceed for PCD, and hence the resuscitation was continued The baby was delivered in 5 minutes but unfortunately was pronounced dead after 45 minutes of resuscitation by the paediatric team Maternal resuscitation was continued for 28 minutes and return of spontaneous circulation (ROSC) was achieved 17 minutes post-delivery despite interventions and required exceedingly high ventilator settings A joint decision between emergency medicine and obstetric teams was made which was not for further chest compressions in the event of cardiac arrest

CHRONOLOGY IN EMERGENCY DEPARTMENT

DISCUSSION / CONCLUSION

SURVIVAL IN OHCA

OHCA's survival rate plummeted, with 83.4 percent dying within 24 hours. In COVID-19 patients, the chances of surviving 30 days were slim (4.7 percent vs 9.8 percent). Women are nine folds more likely to die suffering a cardiac arrest during pandemic.

WHAT IS THE CORE OF THE PROBLEM?

The chain of survival in OHCA has been severely disrupted during the pandemic owing to changes in public behaviour, lockdowns, the stigma of contracting COVID-19,



Figure 1: Survival from sudden cardiac arrest

reluctance bystander cardiopulmonary resuscitation (CPR), decrease in ambulance response time, a silent nature of COVID-19 illness, and limited availability of intensive care units for post-resuscitation care. Patient was pronounced dead and was accepted by the family

ETHICAL DILEMMA IN PREGNANT WOMEN

The patient's prognosis was poor from the start. According to the patient's history, she may have been in cardiac arrest for more than 20 minutes. For every minute that CPR is delayed, the patient's chances of survival drop by 7-10%. Exposure risk during the performance of aerosol-generating resuscitation methods must be properly justified. In patient whose resuscitation was deemed futile do not attempt CPR (DNACPR), which should be sought earlier by their family members. However, there was no time for these coversations during OHCA.

- PCD or also known as resuscitative hysterectomy should be performed within 4 minutes of witnessed arrest.
- PCD will result in immediate release of aortocaval compression, improved venous return and cardiac output, impoved pulmonary mechanics, and decreased oxygen efforts.

Multiple ethical dilemmas have arisen from resuscitation in the Covid-19 pandemic. Despite these obstacles, clinicians must consider each case as unique and endeavor for the best outcomes for their patients while remaining vigilant of existing local resources.

DISCLOSURES

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CONFLICT OF INTEREST FOR ALL AUTHORS None declared.

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