Sultanate of Oman
Ministry of Health
The Royal Hospital
Department of Obstetrics and Gynecology

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Title: Amniotic Fluid Embolism

1.0 Introduction

1.1 Definition: Amniotic fluid embolism (AFE) is a rare catastrophic condition that appear to involve the intiation of a "cytokine storm" as the results of exposure to an unknown inciting antigen, possibly related to amniotic fluid contents , that tipically occurs during labor or delivery

1.2 Incidence: 1.9-6.1 cases per 100,000 deliveries .

1.3 Maternal Mortality rate: 80%

2.0 Risk factors for Amnioticfluid embolism (AFE)

- Multiparity.
- Advanced Maternal Age (GreatestIncrease Occurring after age 39).
- Precipitatelabor with intact membranes.
- Trauma.
- Medical Induction Of Labor.
- Cesarean Section Or Operative Vaginal Delivery.
- Abruption,.
- Placenta Previa.
- Uterine Rupture.

3.0 Clinical features

- Characterized by sudden cardiovascular collapse, profound hypoxia and subsequent coagulopathy.
- Acute hypoxia – sudden dyspnoea, cyanosis or respiratory arrest
- Acute hypotension or cardiac arrest
- Coagulopathyoccurs in 40% of cases
- Onset of symptoms could occur during labor, caesarean section, or evacuation of the uterus or within 30 minutes post partum.

4.0 Management

4.1 **Diagnosis-** Thereis no single clinical or laboratory finding which by itself can diagnose amniotic fluid embolism. Diagnosis is by exclusion and when absence of other explanations for the signs and symptoms is observed.

4.2 Treatment is essentially supportive.

4.2.1 Thepatient should be **transferred to the ICU** and managed jointly with the physicians and anesthetists.

The three **goals of treatment** are

4.2.2 **Aggressive oxygenation -** High flow oxygen should be administered. In unconscious patients endotracheal intubation and mechanical ventilation with 100% oxygen is required.

4.2.3 **Treatment of circulatory collapse**

- Crossmatch at least 6 units of blood. Also request for a coagulation screen and fibrin degradation product levels.
- Communication with the blood bank and the hematology consultant is essential.
- ACVP line needs to be sited before DIC develops.

4.2.4 Combating the coagulopathy

- The coagulopathy will need to be corrected with platelets, fresh frozen plasma and cryoprecipite.
- Clearance of FDPs may be enhanced by the administration of cryoprecipitate rich in fibrinogen.

4.2.5 Haemorrhage may occur due to coexistent uterine atony for which oxytocic drugs may be required.

4.2.6 If pulmonary edema develops then lasix and digoxin are indicated.

4.2.7 Send blood sample from CVP line and bronchoscopic aspirate for fetal squamous cells

5.0 References:

Title of book/ journal/ articles/ Website	Author	Year of publication	Page
Amniotic fluid embolism: antepartum, intrapartum and demographic factors	Fong A, Chau CT, Pan D, et al	*J Matern Fetal Neonatal Med*. 2014 Jun 30	1-6.

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