

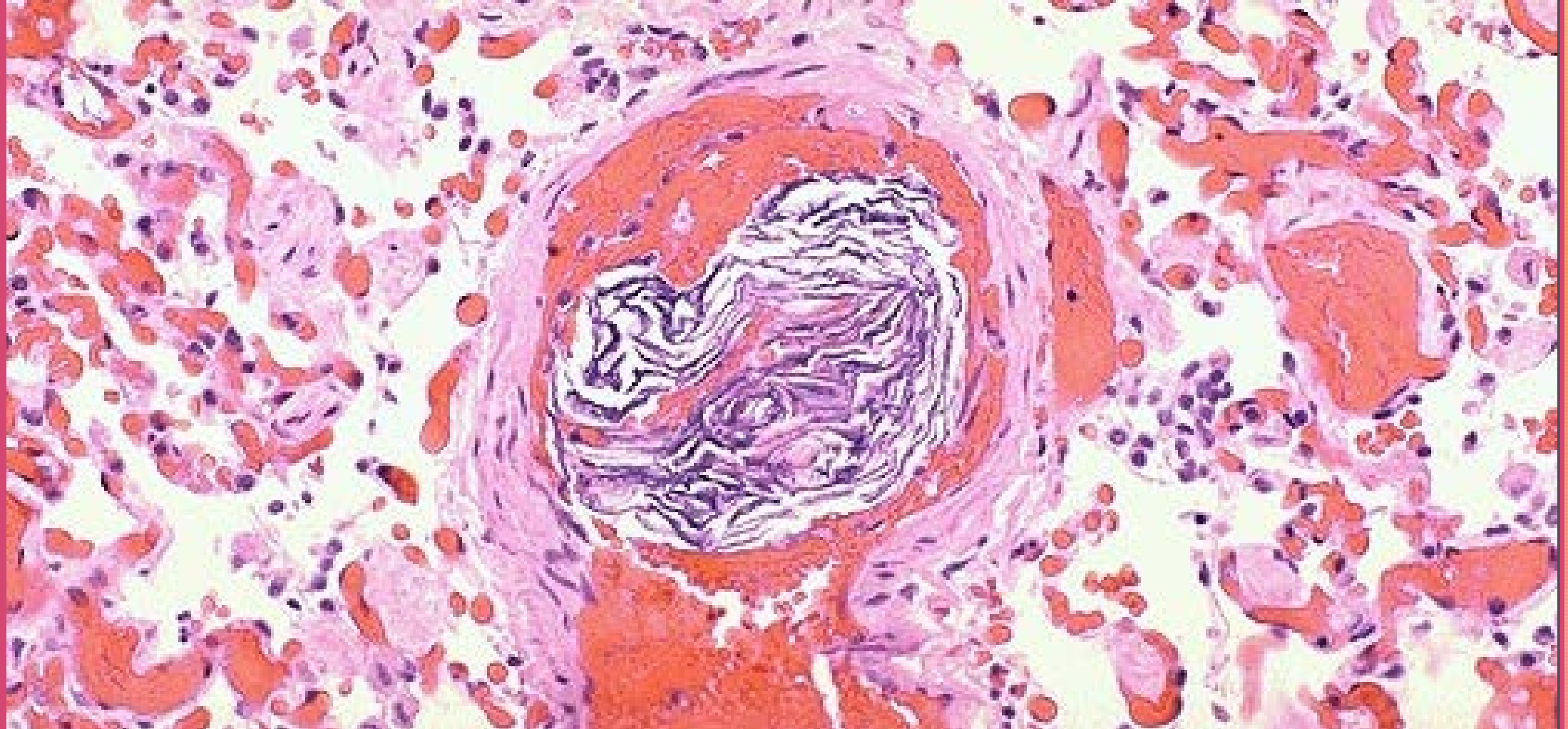
Amniotic Fluid Embolism

Pathophysiology, Diagnosis
and Management





- What exactly **is** amniotic fluid embolism?



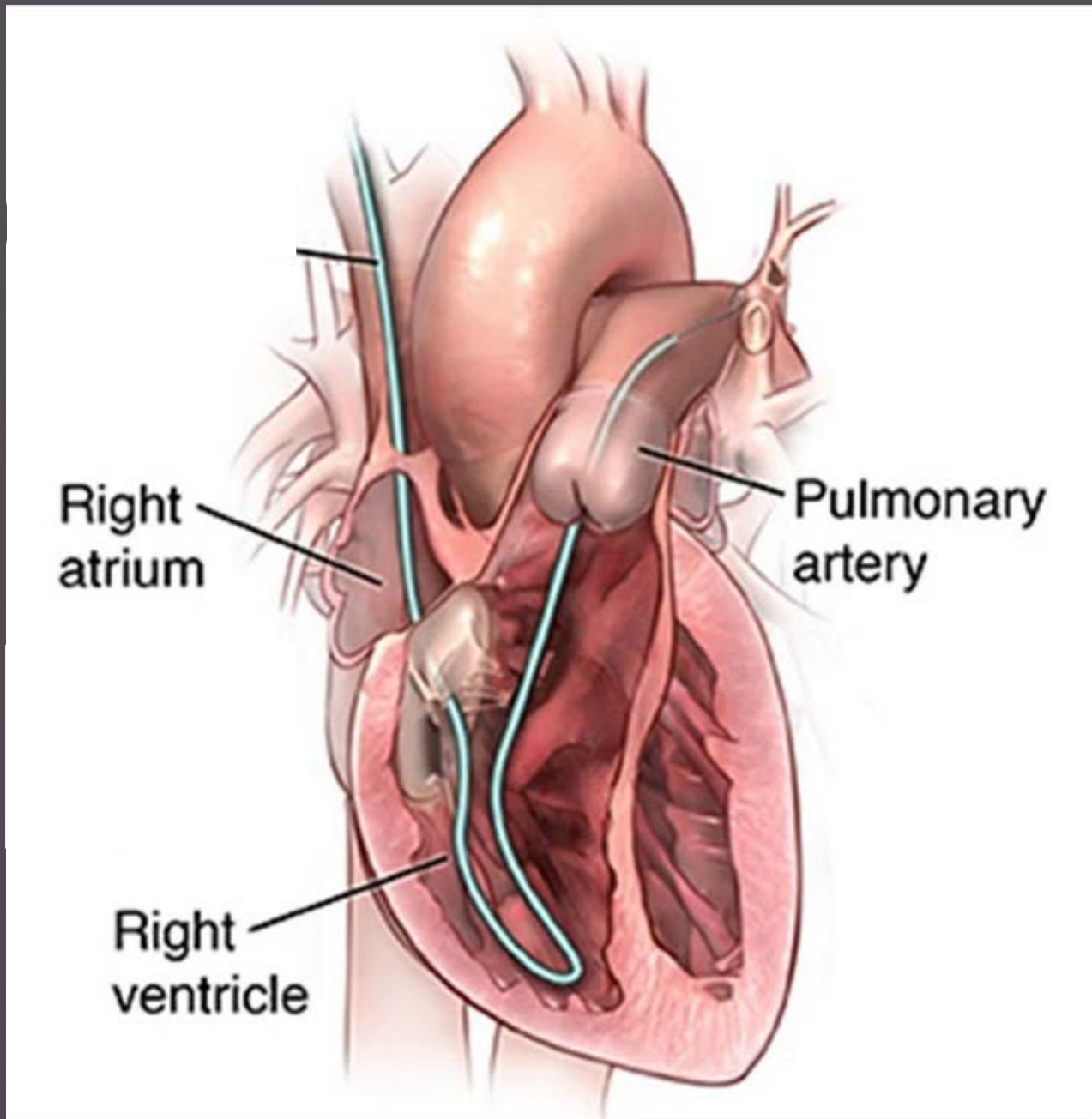
▶ Pulmonary vascular obstruction?

Photo: University of Utah Medical Library Histopathology Online



Won't someone think of the animal (studies)?

Photo: New York Times and Wisconsin National Primate Research Center



- 1980s – advent of pulmonary artery catheter as common place in critical care
- Identical pulmonary histopathologic findings in pregnant women with a variety of conditions NOT related to AFE

▶ No Wastebaskets!

- Let us be careful not to make the diagnosis of amniotic fluid embolism a waste basket for cases of unexplained death during labor...



▶ Anaphylactoid syndrome of pregnancy

- Recognition of similarity between AFE and SIRS-type symptoms
- Attempted reclassification in 1995 by Clark and colleagues

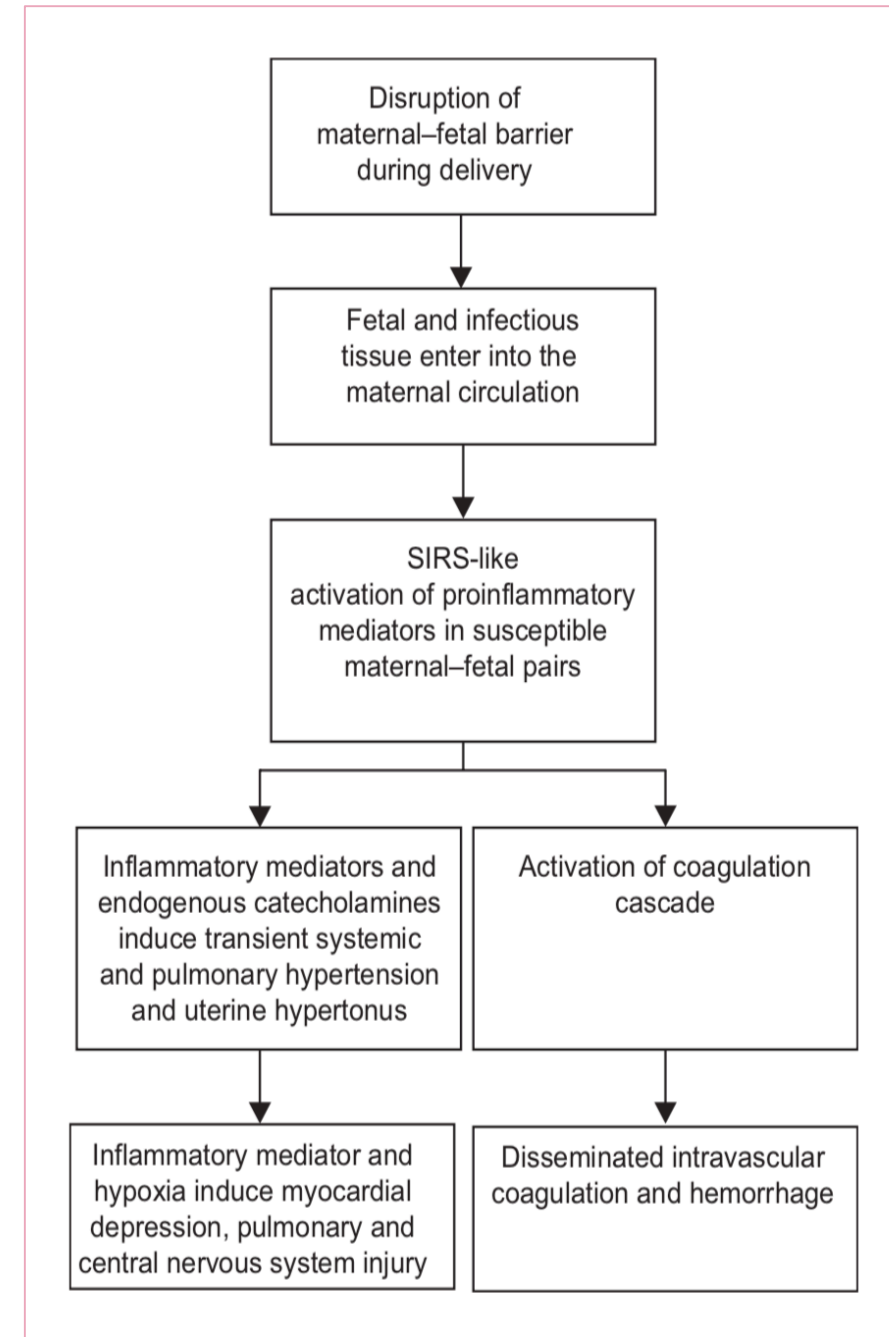
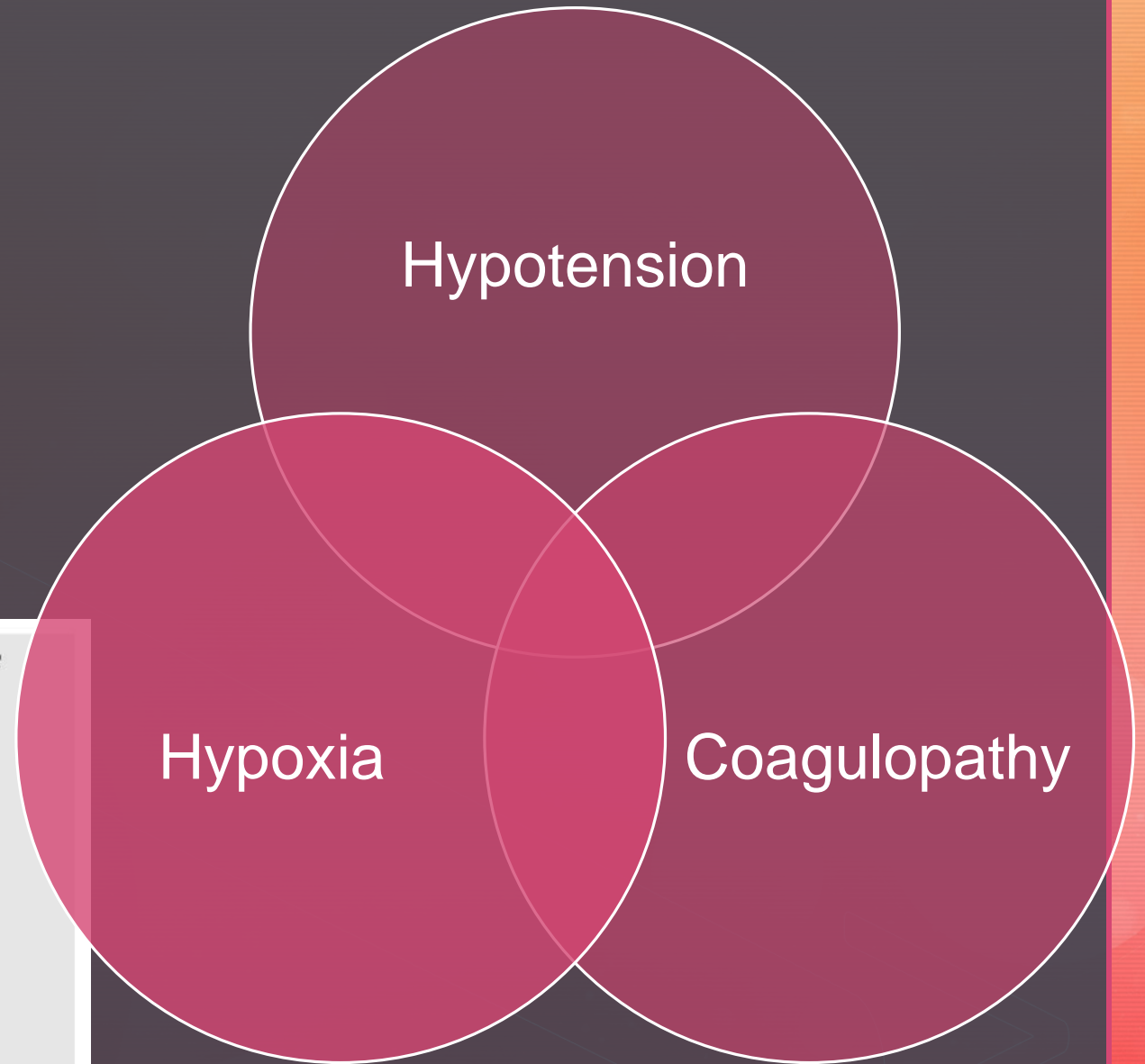


Diagram: Clark. Amniotic Fluid Embolism.
Obstet Gynecol 2014.

▶ “Classic Triad”

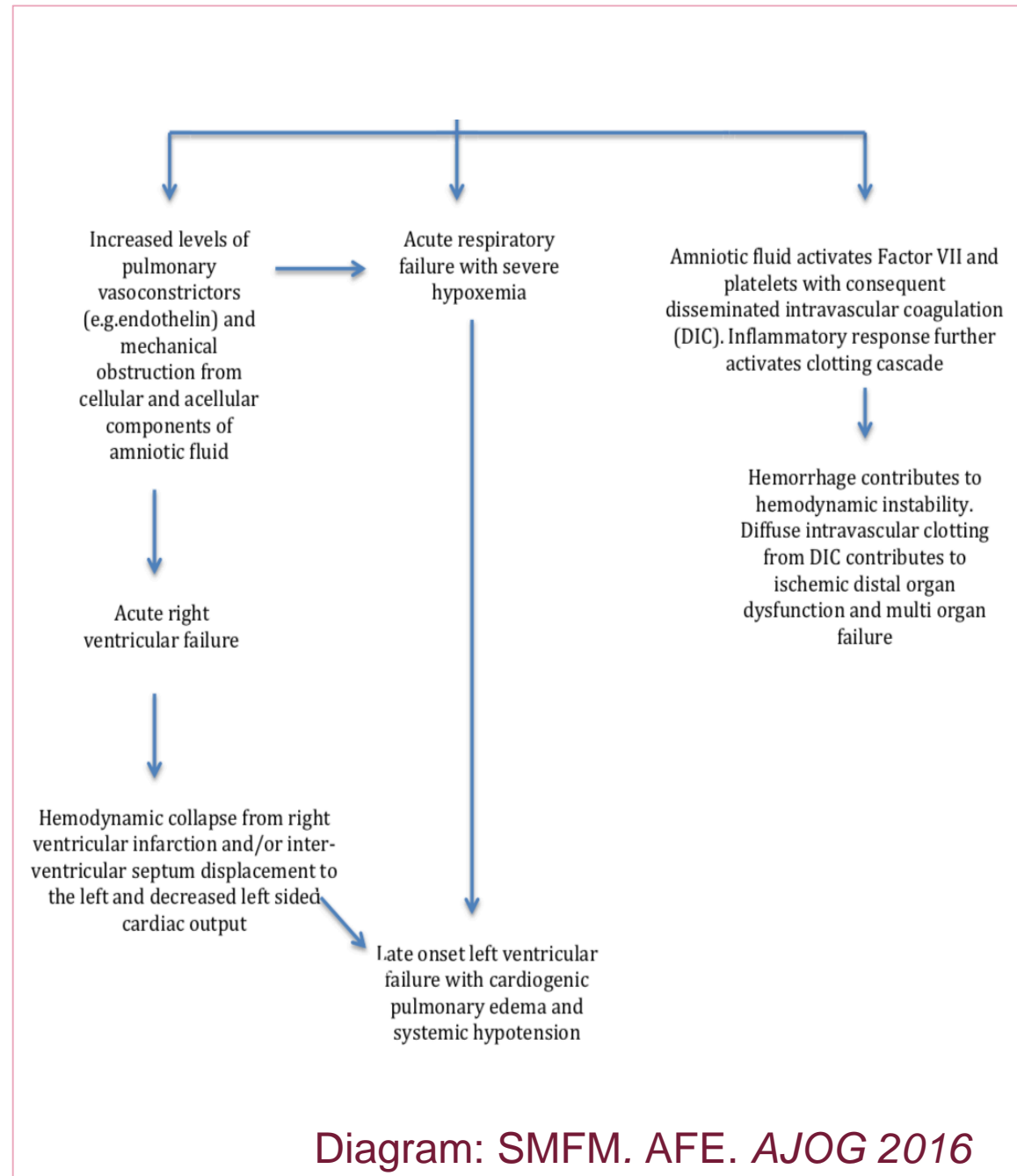


Box 1. Common Early Signs and Symptoms of Amniotic Fluid Embolism

Hypotension
Dyspnea
Cyanosis
Frothing from mouth
Fetal heart rate abnormalities
Loss of consciousness
Cardiac arrest
Bleeding from uterus, incisions, or intravenous sites
Uterine atony
Seizure-like activity

▶ Clinical Progression

- Phase I:
 - AMS, respiratory distress, hypoxia
 - Hemodynamic collapse, and in severe cases, cardiac arrest
- Phase II (not present in all cases)
 - Coagulopathy and hemorrhage
 - DIC
- End-organ system failure
 - ARDS
 - Myocardial dysfunction, infarction, left ventricular failure
 - "Shock liver"



Management

- Cardiopulmonary arrest = effective CPR and delivery if >23 wks
- Correct coagulopathy
- Support blood pressure but do not fluid overload due to early right heart failure

