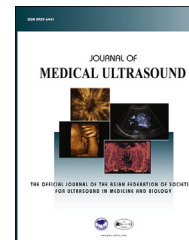


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IMAGING FOR RESIDENTS

Intrapartum Respiratory Distress

S.W. Steven Shaw^{*,1,2}

¹ Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital, Linkou, and ² Chang Gung University, College of Medicine, Taiwan

Section 2—Answer

A 44-year-old multigravid woman was referred at 14 week's gestation with type II diabetes mellitus and essential hypertension superimposed with pre-eclampsia. Her first baby was delivered by Cesarean section 10 years ago. She experienced open heart surgery for correction the Tetralogy of Fallot when she was 9 year-old. The prenatal checkup was uneventful except the hypertension that was regularly controlled by oral medicine. Prenatal cardiac sonography revealed normal systolic function with adequate left ventricle ejection fraction (63%). The scheduled Cesarean section was arranged at 37 week's gestation under general anesthesia due to the failure trial of regional anesthesia puncture. The oxygen saturation was 99% before delivery of the baby, but dramatically went down to 80% as soon as closure of the uterine wall. Manual ambu bagging was performed to keep saturation level back to 95%. The oxygen mask was used to maintain the saturation after extubation in the recovery room. Twelve hours later in the ward, several episodes of short of breath and desaturation (78%) were found again. Emergent computed tomography (CT) angiography of chest was arranged and a mass lesion was found in major vessel (Figure 1, arrow). What is the diagnosis?

Interpretation

In Figure 1, emergent computed tomography angiography of chest was arranged and a pulmonary embolus measuring



Figure 1 Computed tomography angiography in chest. The arrow indicated the embolus in right pulmonary artery.

0.5 × 0.5 cm was found in the anterior–superior branch of the right pulmonary artery (Figure 1) with bilateral pleural effusion. Hemogram demonstrated the impending coagulopathy. She was then transferred to the intensive care unit with anticoagulant therapy. Her condition became stable, and she was discharged smoothly after 10 days.

Discussion

Here is the classic presentation of intrapartum pulmonary embolism (IPE). IPE can be very severe, leading to death [1]. The risk factors include obesity, bed rest,

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* Correspondence to: Dr. SWS Shaw, Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital, Linkou, 5, Fu-Shin Street, Taoyuan 333, Taiwan. Tel.: +886 3 3281200x8251; fax: +886 3 3288252.

E-mail address: dr.shaw@me.com.

hypercoagulability, and pregnancy [2]. Vascular damage caused either during vaginal delivery or cesarean section, leading to endothelial injury, has also been reported [3]. To identify the high-risk groups and initiation of preventive medication are the keys to decrease the incidence of IPE. The pregnant women receiving long-term tocolysis are at a high risk of developing deep vein thrombosis or a rare condition of pulmonary embolism. IPE can be diagnosed or suspected via obvious clinical changes in the respiratory pattern [4]. Computed tomography scan is also a helpful tool for definite diagnosis if the thrombus could be seen, but not in every case. Here we presented a rare case of IPE with early intervention, resulting in a favorable prognosis. Poor oxygen saturation during or after delivery should always be considered as the possible diagnosis of pulmonary embolism.

References

- [1] Hidaka N, Hachisuga M, Tsukimori K, et al. Intrapartum placement of an inferior vena cava filter for a woman with hereditary antithrombin III deficiency: its role in the prevention of fatal pulmonary embolism. *J Obstet Gynaecol Res* 2008;34: 95–9.
- [2] Bennett A, Chunilal S. Diagnosis and management of deep vein thrombosis and pulmonary embolism in pregnancy. *Semin Thromb Hemost* 2016;42:760–73.
- [3] Goodacre S, Hunt B. The problem of pulmonary embolism diagnosis in pregnancy. *Br J Haematol* 2016;175:971–2.
- [4] Hamilton EJ, Green AQ, Cook JA, et al. Investigating for pulmonary embolism in pregnancy: Five year retrospective review of referrals to the acute medical unit of a large teaching hospital. *Acute Med* 2016;15:58–62.