

中文題目:利用心肺監測器來評估及治療嚴重主動脈瓣夾窄併嚴重肺水腫之病人

英文題目: Using Cardiopulmonary Monitor in Evaluation and Treatment the Patient of Severe Aortic Stenosis with Severe Acute Pulmonary Edema

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**Introduction:** As we know that acute pulmonary edema with acute respiratory failure is the critical status, and it needs using diuretics to dry lung aggressively. But in patients with severe aortic stenosis, it may induce sudden death if keeping intake/output (I/O) negative too much and too quick. Here is discussing about closely monitoring lung volume to evaluation and treatment of acute pulmonary edema.

**Case Presentation:** A 89-years-old female with past history of hypertension, congestive heart failure, NYHA Fc IV, atrial fibrillation, and severe aortic stenosis (AS), was admitted due to dyspnea. Initially she was treated as pneumonia. But worsening wheezing dyspnea and intubation was performed on the 3<sup>rd</sup> admission day. Chest X ray (CXR) showed bilateral worsening infiltration. Mechanical ventilator with high FiO<sub>2</sub> up to 80% and high positive end expiratory pressure (PEEP) was used. Due to severe AS, we used the cardiopulmonary monitor to evaluation of extra-lung vascular water index (ELWI), and intravascular colloid fluid transfusion was performed.

**Result:** As we know that blood pressure is equal to oncotic pressure plus hydrostatic pressure. After colloid fluid transfusion to increasing oncotic pressure, diuretics used to reducing hydrostatic pressure and dry lung, and also using cardiopulmonary monitor to evaluation of ELWI, the dyspnea improved gradually. Following CXR showed pulmonary edema resolving, then we tapered FiO<sub>2</sub> and PEEP well.

**Conclusion:** By using the cardiopulmonary monitor to evaluate ELWI, we could closely monitor I/O exactly, and reduced the risk of sudden death in patient with severe AS during treated with dry lung status.