

Acute Lung Edema Following Cesarian Section in a Pregnant Women with Mitral Stenosis: Letter to the Editor

Mitral Stenozlu Gebede Sezaryen Operasyonu Sonrası Akut Akciğer Ödemi

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Acute rheumatic fever and rheumatic valvular disease remain prevalent in many parts of the world, and are probably the most common cause of heart disease in pregnancy. Mitral stenosis is the most frequently encountered rheumatic valvular lesion. A variety of pregnancy-associated cardiovascular changes often exacerbate the signs and symptoms of valvular lesions particularly the increase in the plasma volume and in the heart rate.¹ Even acute lung edema can occur during this period as an initial manifestation of mitral stenosis.² As a consequence of the heart complications, in these patients with mitral stenosis the mortality rates are higher than those found in healthy pregnant women. A case of asymptomatic, newly diagnosed, moderate mitral stenosis in a pregnant woman is described.

A 31 year old woman at 38 weeks' of gestation was brought to our operating room for emergency cesarean section. Her preanesthetic evaluation revealed normal physical examination and laboratory findings. She was initiated general anesthesia and baby was delivered successfully. Two hours later she complained of respiratory insufficiency than six hours later she was admitted to ICU with dyspnea and pink - frothy sputum. Her blood pressure was 95/55 mmHg, her heart rate 140 beats per minute, her temperature 37,0°C, and her oxygen saturation while breathing room air 63 percent. Chest auscultation reveals rales and rhonchi bilaterally. She was intubated and frequent aspiration from the endotracheal tube done. Her heart rate was decreased with 5 mg propranolol IV. A chest radiograph shows diffuse bilateral infiltrates consistent with pulmonary edema and Transthoracic echocardiography finding was moderate mitral stenosis. Transthoracic echocardiography confirmed moderately severe mitral stenosis with an estimated valve area of 1,8 cm². The estimated pulmonary artery systolic pressure was 30 mmHg. Left ventricular function was normal and there was slight left atrial dilatation. She was diagnosed as pulmonary edema developed secondary to moderate mitral valve stenosis. She was thought to be fluid

overload and initiated intravenous diuretics 40 mg IV frusemide bolus than perfusion of Frusemide IV10 mg/h, nitroglycerin IV 1 mg/h and morphine IV10 mg to lower pulmonary edema, pulmonary venous pressures and preload. Central venous pressure was maintained at 5-10 mmHg. After 4 hours of mechanical ventilation her blood gas analysis improves, FiO₂ and PEEP were lowered to normal levels gradually. After 24 hours, her clinical situation became well and weaning from the mechanical ventilation and extubation was performed.

Mitral stenosis is the most common clinically significant cardiac abnormality seen in pregnant women. During pregnancy several haemodynamic

changes exacerbate the cardiovascular aberrations associated with mitral stenosis. Mortality among pregnant women with mild or moderate mitral stenosis and minimal symptoms, however, is less than 1%.³ The postpartum period is the most critical period for acute pulmonary hypertension decompensations⁴ therefore close monitoring of patients in ICU is essential in pregnant patients with cardiac abnormalities.

This case illustrates the dramatic physiological impact of volume overload and diuresis in a patient with moderate mitral stenosis. We described pulmonary edema developed following cesarian section and the successful management of patient in ICU.

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