

Acute pulmonary thromboembolism caused by prolonged oral contraceptive therapy: case report

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Purpose: Acute pulmonary thromboembolism (APTE) is common and potentially life-threatening cardiovascular emergency. The fatality rate in acute cases ranges from 7-11%. In most cases (90%) APTE is considered to be a consequence of deep vein thrombosis (DVT). There are many predisposing risk factors for APTE. Oral contraceptive therapy (OCT) is one of the moderate predisposing risk factors that must be thoroughly considered in young patients.

Methods and results: We present a clinical case of 23 years old female patient complaining on sudden onset of fatigue, shortness of breath, dyspnoea, and syncope a few hours before admission. Physical examination showed cyanosis, hypotension (80/50 mm Hg), tachypnoea and tachycardia, accompanied by cold periphery - patient was in cardiogenic shock. She had a history of continuous 4 month OCT usage prescribed for acne facials treatment. We performed urgent blood laboratory, ECG, echocardiography (ECHO) and multi-detector computed tomography (MDCT) of the pulmonary circulation and started treatment with fibrinolytic agent (alteplase). D-dimer levels were elevated. ECG showed sinus tachycardia with right axis deviation. ECHO detected normal LV function with significant tricuspid regurgitation and right ventricle overload. MDCT angiography of the pulmonary circulation revealed intraluminal thrombi in lobar and segmental branches of the pulmonary arteries causing incomplete luminal obstruction. Diagnosis of APTE was confirmed. Venous Doppler ultrasound of the lower limbs excluded DVT. Her condition soon became clinically and hemodynamically stable, with normal blood oxygen saturation and normalized blood pressure levels. Further treatment with anticoagulant agents was continued. Six-months MDCT angiography follow up showed no filling defects, total resorption of intraluminal thrombi and complete restoration of the pulmonary circulation.

Conclusion: APTE is serious, potentially fatal condition which may be provoked by prolonged and uncontrolled OCT usage. We should always considered OCT as a potential predisposing factor for thromboembolic complication, especially in young female patients. Early diagnosis of APTE remains essential since overall survival depends on the timing of initial therapy (fibrinolytic or anticoagulant). MDCT angiography has become the method of choice for imaging the pulmonary vasculature for suspected APTE in routine clinical practice.

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