Abstract: P2233

Case with successful interventional treatment with local thrombolysis for high-risk pulmonary embolism in a patient with multiple blood transfusions after gastrointestinal bleeding

Authors:
K Trayanova Stoyanova¹, R Ivanova¹, K Karamfiloff¹, M Shumkova¹, TS Boneva¹, L Vladimirova¹, R Marinova¹, V Pakerov¹, D Vassilev¹, ¹University Hospital Alexandrovska - Sofia - Bulgaria,

Topic(s):
Pulmonary Embolism

Citation:
A 58 year old male was admitted in a surgery with a clinical signs of hemorrhagic shock due to gastrointestinal bleeding. From laboratory tests - hemoglobin 23 g/l (normal range 130-180 g/l). Laparotomy and sutura were performed because of bleeding gastric ulcer. In the perioperative period he received 11 bags of red blood cells and 11 bags of fresh frozen plasma. He was stabilized hemodynamically. On 12th postoperative day he presented with acute breathlessness, hypoxemia, chest pain and severe hypotension. ECG - sinus tachycardia and new right bundle branch block. Transthoracic echocardiography (TTE) showed a dilated right ventricle, severe tricuspid regurgitation and pulmonary hypertension (mean PAP about 50 mmHg), a sign of McConnell. A Doppler ultrasound of the lower extremities ruled out deep venous thrombosis. The patient was transferred to cardiology department. Regarding diagnostic scores pulmonary embolism (PE) is most likely diagnosis. Pulmonary angiography revealed PE with thrombotic masses in bilateral main pulmonary arteries. Because of high risk for bleeding in our patient we choosed to perform a catheter-mediated thrombus fragmentation and a local thrombolysis with 50 mg of alteplase. During the hospitalization the patient was optimal anticoagulated, without bleeding, on proton-pump inhibitor. Within 1 week he recovered completely and was discharged on a DOAC (apixaban 5 mg twice/daily) for a 3-month period. One month later the patient was asymptomatic. Control TTE was with decreased pulmonary pressure and normalized right ventricle size.

Discussion: Acute pulmonary thromboembolism is a postoperative complication that is particularly common in operated patients, but in this case we may discuss also the role of the massive blood transfusions and immobilization after operation. Selecting an optimal treatment for PE is challenging. Thrombolytic therapy and catheter embolectomy are common therapeutic interventions. Although thrombolysis is effective, it can cause bleeding, especially after surgery.

Conclusion: We present a rare case of PE due to multiple blood transfusions with high risk for bleeding (recent operation and gastrointestinal bleeding within previous 3 weeks) in which percutaneous intervention with local thrombolysis is the safest and most effective treatment.