Six hours post thrombolysis, color Duplex ultrasound showed a tri-phasic flow over the left common femoral artery down to the popliteal artery with a mono-phasic flow distally pointing towards a partial occlusion at the site of trifurcation. Thrombosis of the left popliteal vein as well as the occlusion of the left subclavian artery remained unaltered. CT of the abdominal aorta on the following day showed a complete recanalization of the superior mesenteric artery (fig. 4).

As the clinical finding on the left upper extremity did not require immediate surgery (no motor or sensory deficit), vascular surgeon opted for continuous intravenous heparin and reassessment 48 hours after thrombolysis. At that point complete recanalization of the subclavian artery was observed. Patient was switched back to nadroparin 0.8 ml subcutaneously twice a day and warfarin treatment was initiated later.

Contrast transesophageal echocardiography with agitated dextrose detected patent foramen ovale (PFO), the channel being 22 mm long and 4.2 mm wide following Valsalva maneuver (fig. 5). The patient is currently doing well and scheduled for the closure of the PFO.

Discussion

Venous thromboembolism (VTE) is a frequent complication of orthopedic/traumatologic surgery and develops less frequently in non-orthopedic surgery (5). According to White et al, 2.8 % of patients undergoing hip arthroplasty and 2.1 % of patients undergoing knee arthroplasty were diagnosed with deep vein thrombosis or pulmonary embolism within 3 months of surgery (1). The risk of VTE is highest during the first two post-operative weeks but remains elevated for 2 to 3 months (5, 6) and 75 % of deep vein thrombosis after orthopedic surgery occur in the operated leg (7) which was also the case of our patient. Antithrombotic prophylaxis significantly reduces the risk of peri-operative VTE. The incidence of VTE is reduced with increasing duration of thromboprophylaxis after major orthopedic surgery, this association has not been shown for general surgery (5). Current guidelines of the American College of Chest Physicians recommend pharmacological prophylaxis for a minimum of 10–14 in major orthopedic surgery with the suggestion to extent it up to 35 days (3). Our patient received prophylactic dose of LMWH for 21 days after non-major orthopedic surgery. Except fracture, surgery and subsequent limited mobility no other strong/moderate risks factors for VTE were identified. Only weak risk factors such as increasing age and obesity were present. The patient had no previous history of VTE and laboratory tests for hypercoagulable states (including protein C and S, antithrombin III, factor V Leiden, prothrombin, lupus anticoagulant and antiphospholipid antibodies) were negative. Our patient was administered nadroparin 0.4 ml s.c. once daily during the whole prophylaxis period, even though nadroparin 0.6 ml s.c. once daily should have been started on day 4 after surgery (patient's weight was exceeding 70 kg). We do not have an explanation for this reduced prophylactic LMWH dose in a patient with normal kidney functions. The prophylactic LMWH treatment was guided by traumatologists/orthopedists.

As a 21-day long pharmacological prophylaxis in our patient without additional risk factors was not sufficient to prevent VTE, we think that extended prophylaxis in orthopedic/traumatologic patients till full

Fig. 3. *Partial occlusion (arrow) of superior mesenteric artery of 12 mm of length*

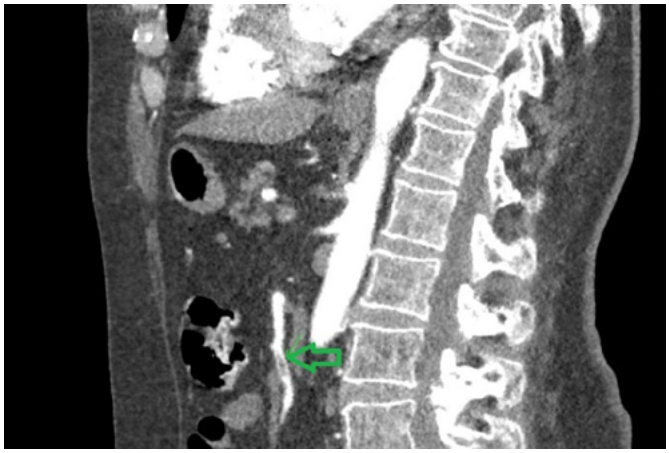

Fig. 4. *Complete recanalization of the superior mesenteric artery*

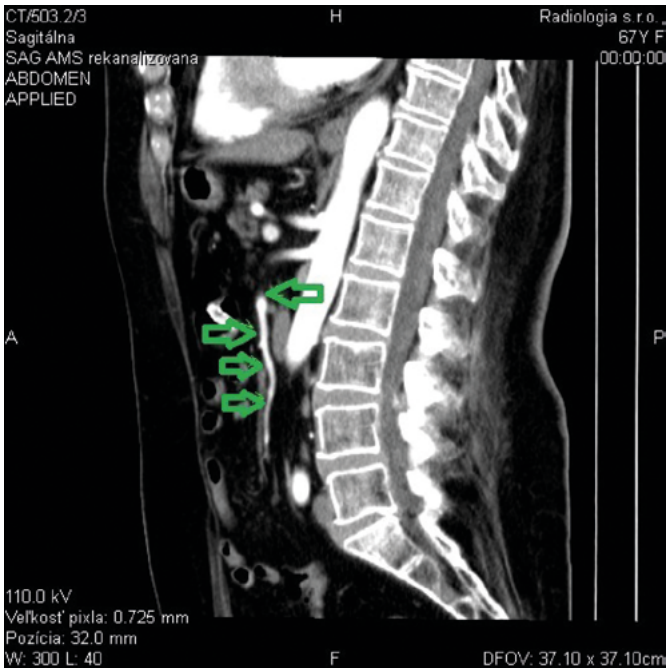

Fig. 5. *Contrast transesophageal echocardiography with agitated dextrose showing patent foramen ovale, length of the channel 22 mm, width of the channel 4.2 mm following Valsalva maneuver. Courtesy of Juraj Dubrava, MD, PhD., FESC, Head of the Department of Non-Invasive Cardiology, University Hospital Bratislava, St. Cyril and Method Hospital*