# A RARE COMPLICATION OF SCLEROTHERAPY: PULMONARY EMBOLISM

## Case Report

# SKLEROTERAPİNİN NADİR BİR KOMPLİKASYONU: PULMONER EMBOLİ

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## ABSTRACT

This report describes a pulmonary embolism after sclerotherapy treatment for a varicose vein in the lower exremity. A 56 year old woman without a significant medical history admitted to our emergency department with sudden onset of palpitation, dyspnoea and left sided chest pain. Lower extremity Doppler ultrasound revealed acute venous thrombosis. A computerized tomography revealed unilateral pulmonary emboli. Although pulmonary embolism is a rare complication of sclerotherapy, it is potentially one of the most serious so patient should be followed up very closely after this procedure.

**Key words:***Pulmonary embolism; varicose vein; sclerotherapy.*

## ÖZET

Bu raporda alt ekstremitede variköz ven için uygulanan skleroterapi tedavisi sonrası gelişen pulmoner emboli tanımlanmaktadır. Önemli tıbbi özgeçmişi olmayan 56 yaşında bir kadın hasta aniden başlayan çarpıntı, dispne ve sol yan ağrısı ile acil servisimize başvurmuş, alt ekstremitesinde doppler ultrasonografi'de akut venöz tromboz, çekilen göğüs bilgisayarlı tomografisin'de ise tek taraflı pulmoner emboli saptanmıştır. Pulmoner emboli skleroterapinin nadir bir komplikasyonu olmasına karşın, bu işlemden sonra hasta yakından takip edilmeli ve bilgilendirilmelidir.

**Anahtar kelimeler:** *Pulmoner emboli;variköz ven; skleroterapi*

## INTRODUCTION

Foam sclerotherapy is a used to the minimally invasive treatment of varicose veins (1). Anaphylaxis and vascular events, such as stroke, myocardial infarction and thromboembolism, are potential major complications. Minor adverse events include transient visual disturbance, cutaneous necrosis, ulceration, minor vein thrombosis, thrombophlebitis, local neurological injury and skin pigmentation (2). This report describes a pulmonary embolism after foam injection sclerotherapy for treatment of varicose veins.

## CASE REPORT

A 56 year old woman without a significant medical history admitted to our emergency department with sudden onset of palpitation, dyspnoea and left sided chest pain. She was reported only a recent diagnosis of varricose vein in the lower extremities which was treated with sclerotheraphy three days before admission to hospital.

On examination she was tacyhcardic, with blood pressure of 145/88 mmHg and respiratory rate of 23/min. Oxygen saturation was 88% on inhaled room air. Her lung sounds were clear bilaterally and a 3/6 systolic murmur was noted over the tricuspid area. There was no calf tenderness and Homan's sign was negative bilaterally. Laboratory findings was normal except mildy elevated D-dimer level. The 12 lead electrocardiogram showed sinus tachycardia. Chest radiography, performed at bedside was unremarkable. An echocardiography that was performed within the first hour of the patient's admission revealed hypokinesia and dilatation of right ventricule with elevated pulmonary arterial pressure. In light of her recent procedure, symptoms and echocardiographic finding lower extremity Doppler ultrasound studies were performed. The Doppler studies demonstrated venous thrombosis in the right femoral vein. A Computerized tomography (CT) of the chest was immediately arrenged it also indicated the trombus material localized at left inferoposterior segment and branches of pulmonary artery (**Figure 1**).

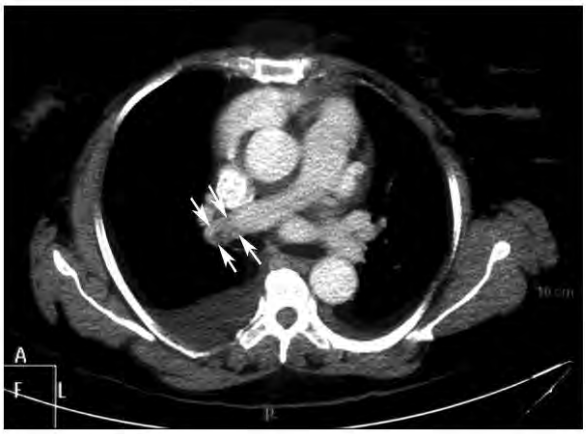


***Figure 1:*** *Computerized tomography view of thrombus in pulmonary artery.*

After the diagnosis of pulmonary embolism, patient was hospitalized and anticoagulant therapy was inititated. An extensive laboratory work-up such as protein C, protein S, antithrombin III activity, factor V Leiden, Prothrombin mutation G20210A, antiphospholipid antibodies was performed in search of any underlying disorders predisposing to thromboembolism, were within normal. The patient was treated initially for her pulmonary embolism with enoxaparin and then switched to warfarin for six months. Symptomatically, she also returned to baseline by this point.

## DISCUSSION

We present here the case of previously healthy woman who devoloped pulmonary emboli after sclerotherapy treatment for a varicose vein in the lower exremity.

The efficacy and safety of foam injection sclerotherapy as a minimally invasive treatment for varicose veins has been documented in large case series. Serious

adverse events associated with foam sclerotherapy occured in 0-5.7 percent of treatment (2). Pulmonary embolism has been described but is rarely. In a case series of (3) 1356 patients, one pulmonary embolism was reported.

This type of complication may be related factors such as the volume of the injected material, the area treated and the use of repeated injections. The optimal volume of foam to treat truncal varices remains controversial. A recent European consensus statement recomended 6 to 8 mL per session, but publised reports have used from 3 mL up to 30 mL (4). Larger volumes of foam are associated with a higher incidence of deep vein thrombosis. Pulmonary embolism as complication of sclerotherapy is thought to occur from the migration of the sclerosant into the pulmonary vasculature causing an acute inflammatory reaction or chemical injury of the vessel wall resulting in an thrombosis (5).

Foam sclerotherapy is conducted as an outpatient procedure, does not require general anaesthesia and compared with surgery, results in an earlier return to normal activities. Although pulmonary embolism is a rare complication of sclerotherapy, it is potentially one of the most serious so patient should be followed up very closely after this procedure.

## CONCLUSION

This case illustrates the need to be aware that embolic events can ocur after sclerotherapy. Extreme caution sould be exercised in patients presenting with suggestive symptoms and signs of a deep vein thrombosis or pulmonary embolus after a procedure.

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