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Case Report

Thromboaspiration of a Pulmonary Embolization of Cyanocrylate after Varicocele Treatment

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Abstract

Pelvic embolization with cyanocrylate is not exempt from potential severe complications, such as pulmonary embolism. The management of this critical situation has not been previously described. Anticoagulant treatment and thrombectomy by aspiration may be a satisfactory option.

Introduction

Percutaneous embolization of pelvic varicose veins has been proved effective when compared to conventional surgery (ovaric/spermatic vein ligation) [1]. Cyanocrylates are a common class of substances used as adhesives, frequently used for pelvic vein embolization. They are usually combined with Lipiodol® (lipid-soluble ethiodized oil) so as to make it radiopaque. The advantage of this combination is slower polymerization of enbucrilate, with more accurate administration of the glue, but a potential disadvantage: higher frequency of embolism [2]. Several cases of embolization have been reported, including acute pericarditis, portal vein embolism or lung embolism after gastric varicose veins treatment [3-5]. Also, we have found one symptomatic case of Pulmonary Embolism (PE) after pelvic varicose veins embolization, and a few cases after an arteriovenous malformation embolization [6-8].

Case Report

A 69-year-old male with a history of recurrent varicocele and lower limb varicose veins, underwent scheduled percutaneous embolization of the left spermatic vein. After right jugular access a catheter was passed though the left renal vein to the left spermatic vein. We used 2ml of cyanocrylate (Magic glue®, n-hexyl cyanoacrylate monomers) and 4ml of Lipiodol®. An upwards migration of the cyanocrylate was detected in inferior vena cava and tiny opacities were found in both lung's fields (Figures 1 and 2). A mechanical thrombectomy by aspiration was applied with Penumbra system® and the lung branches were practically recanalized (Figure 3). The patient showed no symptoms during the procedure. Low molecular weight heparin anticoagulant treatment was initiated. The patient was kept in hospital for two days and he remained asymptomatic the whole time. Oral anticoagulation for 6 weeks was prescribed. Duplex ultrasound was performed 1 and 4 months after the episode and they showed no signs of vein thrombosis at any level. Physical examination was normal after 5 months.

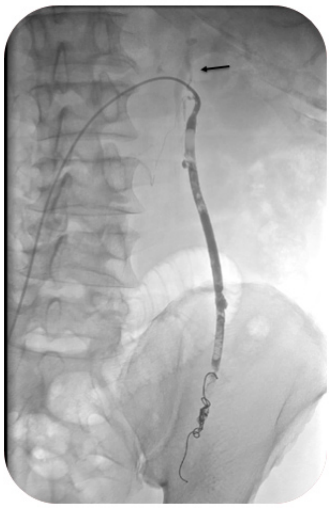

Figure 1: Migration of the cyanocrylate was detected in inferior vena cava.

Figure 2: Cyanocrylate opacities in both lung's fields.

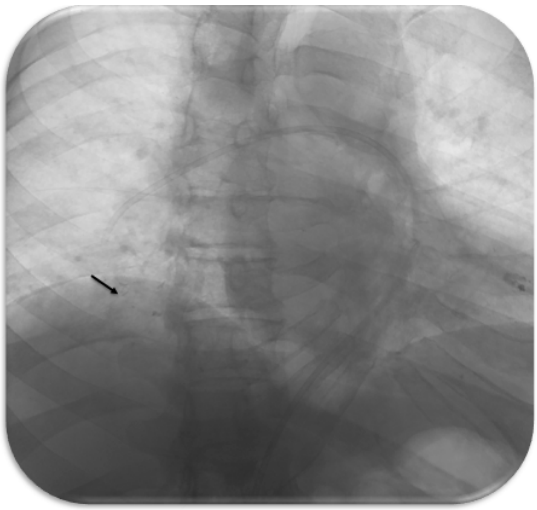

Figure 3: Pulmonary recanalization by thromboaspiration.

Discussion

The use of cyanocrylate has been proven safe and effective in many multidisciplinary fields. The complications associated with its use are rare, but can be very serious, including the death of the patient [9]. Although PE has been described after other venous embolizations, we would like to remark that this complication could occur in scheduled pelvic varicose veins, and the thromboaspiration could improve this critical situation that has been reported for acute unstable PE [5,10]. In our clinical case, due to the approach in the interventional radiology room, we could rapidly detect the lung opacities and that patient remained asymptomatic. Most of the cases described in the literature have been managed conservatively and spontaneous recanalization was observed in some of them [3-7]. Some authors use the cyanoacrylate with coils to avoid systemic embolization [11].

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