Venöz Sistemde 6 Yıl Kalan Kılavuz Tel

A GUIDEWIRE ACCIDENTALLY LEFT IN THE VENOUS SYSTEM FOR 6 YEARS

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Özet

İnvaziv prosedürler sırasında vücut kavitelerinde yanlışlıkla bırakılan yabancı cisimlerle ilgili çeşitli vakalar daha önce yayınlanmıştı. Bizim vakamız santral venöz basınç monitörizasyonu için jugular venöz yaklaşımla kateter takılması sırasında venöz sistemde unutulan bir metal kılavuz tel ile ilgilidir. Kılavuz tel, sağ atriyumla sağ dış iliyak veni bağlayan venöz yolda bulunmaktaydı. Bir koroner anjiyografi prosedürü sırasında tesadüfen tespit edildi. Yabancı cismin hastaya zarar vermeyeceği ve komplikasyona sebep olmacağına karar verildi. Sunduğumuz vakada vasküler sistemde unutulan yabancı cisimlerin yol açabileceği potansiyel komplikasyonlar tartışılmıştır.

Anahtar kelimeler: Vena kava inferior, yabancı cisim, kılavuz tel, santral venöz sistem

Türk Göğüs Kalp Damar Cer Derg 2004;12:138-140

Summary

Various reports of foreign bodies left accidentally in the cavities of human body during invasive procedures have been published. Our case involves a metal guidewire left in the venous system during a jugular venous approach for central venous pressure monitorisation. The guidewire was located in the venous route connecting the right atrium and the right external iliac vein. It was found incidentally during a coronary angiography procedure. The foreign object did not harm the patient and would not cause any complications. The following report includes a discussion about the potential complications of the foreign objects left in the vascular system.

Keywords: inferior vena cava, foreign body, guidewire, central venous system

Turkish J Thorac Cardiovasc Surg 2004;12:138-140

Introduction

The rate of broken venous catheters has been estimated at 0.1%, but no data are available for other types of objects, such as broken guidewires or lost embolization coils. The rate of serious complications associated with foreign body embolism has been reported as high as 71%, with a mortality rate in the range of 24-60% [1]. In particular, patients with cardiopulmonary localization of foreign bodies are at risk for severe complications, ranging from cardiac arrhythmias to perforation.

The danger of imminent septic complications is of primary concern with intravascular catheter fragments. Guidewires and vena cava filters may perforate the vascular wall. For these types of foreign objects, there is a clear and urgent indication for percutaneous removal.

Case Report

A 65-year-old man presented to our clinic for recurrent angina pectoris evaluation. Past medical history included a coronary angiography performed six years ago with a result of two vessel disease, followed by a coronary artery bypass grafting procedure. A central coronary angiography was performed and the saphenous vein graft was seen to be totally occluded. But simultaneously a guidewire of 30 cm long was seen from the right atrium to the right external iliac vein with its soft J point located inferiorly. The retrospective detailed history revealed a central venous catheter insertion using a jugular approach 1 day before the coronary bypass surgery. There was not any image consisted with the guide wire on the chest X-ray taken 2 days before the operation whereas the guidewire is seen clearly on the chest roentgenogram taken two days after the operation. A CT of the thorax and the abdomen was performed subsequently to visualise whether any thrombus or a mass was associated with the guide wire. A pulmonary perfusion scintigraphy was performed and there was no perfusion defect. The venography revealed that the guide wire is completely endotheliazed and it is completely outside the lumen (Figure1-4). The patient was assured that the guide wire would not do any harm to him and it was decided that there was no need to take out the guidewire. Because of the fact that the wire was extraluminal, a prophylaxis of infective endocarditis and oral anticoagulation was decided to be unnecessary. The patient was discharged from the hospital without any adverse events.

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Discussion

The techniques for extraction of intravascular foreign objects have undergone significant changes over the years. Whereas in the early 1980s, retrieval of catheter fragments was still mostly attempted with a Dormia basket [9] or with a self-made wire snare [10], today the nitinol gooseneck snare loop introduced by Amplatz enjoys almost exclusive application [11]. In our case, the most frequently used device by far was a modular combination consisting of an angled snare and a multipurpose catheter with a hook configuration. The combination of these two individual components, because of the two-fold angles of the gooseneck and multipurpose catheter, made it possible to approach foreign objects even in difficult locations and, unlike the experience reported by Egglin and associates [12], to place the loop around objects immediately adjacent to the vascular wall. This latter capability is possible because the combination of the two devices permits the object to be lifted away from the vascular wall. Another advantage of this instrument is its predefined loop diameter and the shape-memory properties of nitinol, which facilitates planning of a three-dimensional procedure in nearly any vascular area. In addition, the nitinol snare is capable of developing a variable amount of force, and foreign bodies can be compressed.

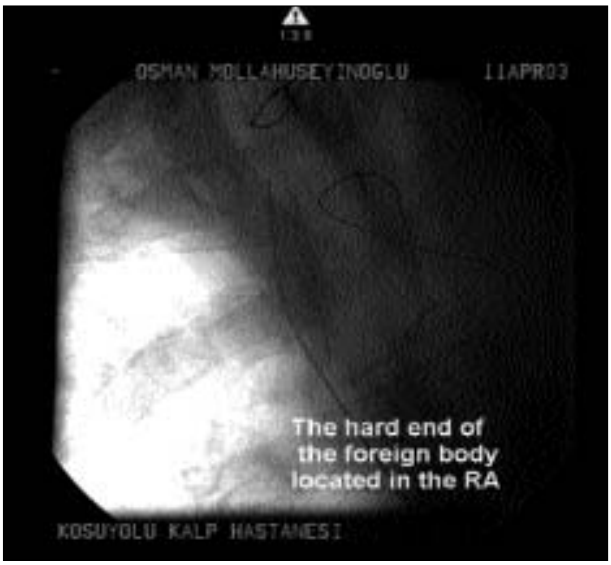

Figure 1. The hard end of the foreign body located in right atrrium.

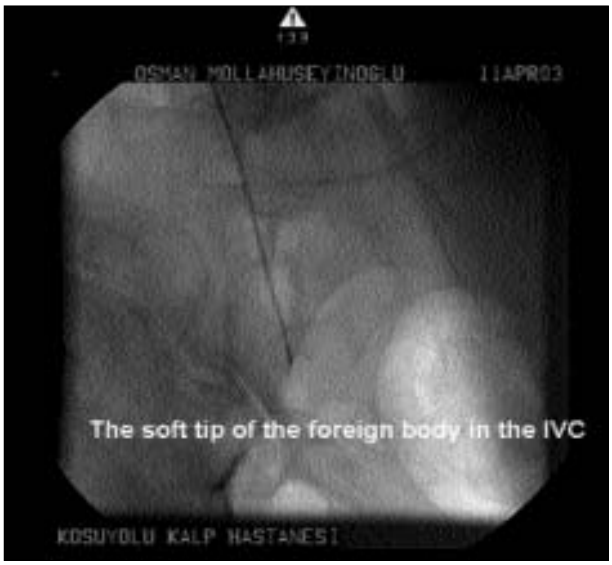

Figure 2. The soft of the foreign body in the interior vena cava.

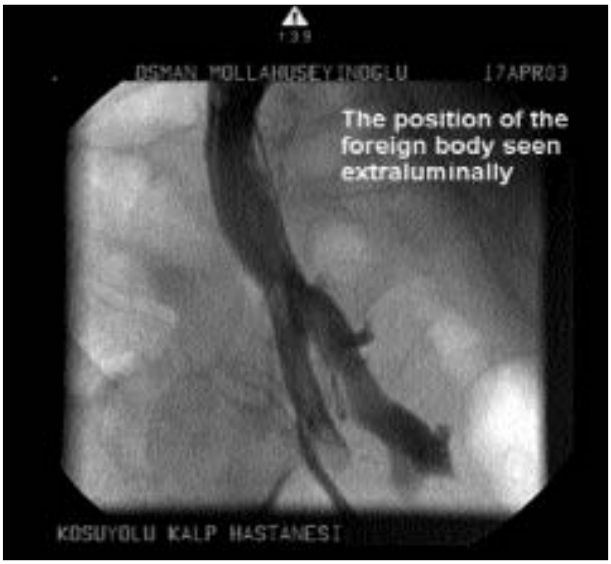

Figure 3. The position of the foreign body seen extraluminally.

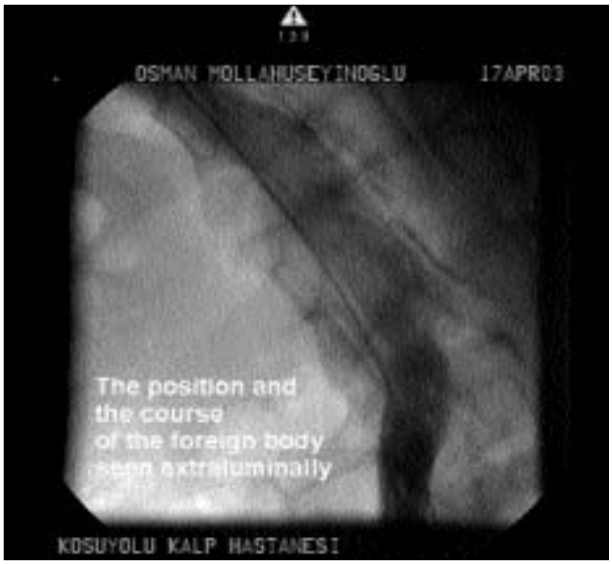

Figure 4. The position and the course of the foreign body seen extraluminally.

There are various reports about foreign objects being left in the body cavities and the vascular system during invasive procedures involving the cavity in which the obect is located. This case was unique that the guidewire was left in the venous system for six years without a complication and without causing any harm to the patient. It was diagnosed incidentally with a coronary angiography and luckily it was seen without causing any of the complications described above.

The importance of this case is that it should always be checked to see the hard end of the guidewire is sticking out the end of the sheath dilator system to prevent it from entering the venous system and complications from happening.

Results from the percutaneous treatment of intravascular foreign bodies continue to prove the procedure's capabilities as a highly efficient, atraumatic method with success rates of 90% or above. Based on the high frequency with which this method is performed, its relevance cannot be underestimated. Creatively used and combined, the numerous available rescue devices can be adapted to the situation at hand and permit a safe retrieval of the intravascular foreign body, even in difficult cases.

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