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Case Report

Snare-Assisted Retrieval of an Embolized Broken Double Lumen from the Heart of a Female Patient Diagnosed with End Stage Kidney Disease: A Case Report

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Abstract

Foreign body embolization is a rare but serious iatrogenic complication that might necessitate transcatheter or even surgical retrieval. A broken double-lumen catheter was snared using a goose neck snare kit. The procedure was successful, and the patient experienced no further complications.

Keywords: Double lumen, Snare kit, Transcatheter retrieval.

استرجاع التجويف المزدوج المكسور بمساعدة الفخ من قلب مريضة تم تشخيص إصابتها بمرض الكلى في المرحلة النهائية: تقرير حالة

الخلاصة

انصمام الجسم الغريب هو مضاعفات علاجية المنشأ نادرة ولكنها خطيرة قد تتطلب القسطرة عبر القسطرة أو حتى الاسترجاع الجراحي. تم فخ قسطرة مزدوجة التجويف مكسورة باستخدام مجموعة فخ عنق الإوزة. كان الإجراء ناجحا ، ولم يعاني المريض من أي مضاعفات أخرى.

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INTRODUCTION

Embolized foreign bodies are a critical challenge in the cardiac catheterization laboratory. Foreign bodies that are embolized to the left side of the heart are more dangerous than those embolized to the right side. Nevertheless, it is generally agreed that foreign bodies in the heart cavities should be removed in order to eliminate them as a source of sepsis, thrombosis, and perforation. If an embolus forms in the peripheral circulation, it may be less harmful than if it forms in the heart itself. However, longer embolized guidewires usually need to be removed surgically or with the help of snares [1,2]. We report a case involving a broken double lumen in the superior vena cava, right atrium, and right ventricle. Subsequently retrieved successfully with a gooseneck snare.

Case Presentation

A 63-year-old female who is a diabetic non-smoker, Hepatitis C and B positive, with a 5-year history of end-stage kidney disease (ESKD) on dialysis. During routine flushing of the double lumen, it gets broken into two pieces. The internal piece embolized to the superior vena cava on the right side of the heart, as shown in the CXR. Her own nephrologist consults the cardiac department 48 hours later for possible transcatheter retrieval. On examination, her pulse rate was 93 beats per minute, regular with good volume, and her blood pressure was 150/85 mm Hg. The cardiovascular system examination revealed the presence of a normal double rhythm. Her electrocardiogram (ECG) showed down-sloping ischemic ST depression with T wave inversion in the anterolateral leads. Chest X-ray shows the foreign body in the heart (Figure 1).

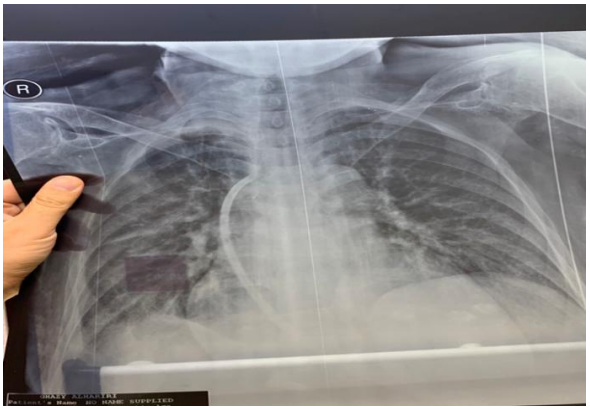

Figure 1: The foreign body inside the heart.

Echocardiography shows the foreign body in the right side of the heart with EF = 58% (Figure 2). Right femoral vein access using a femoral Sheth size 6 French, then a pigtail catheter—using its circular end, size 6 French, introduced just to pull the embolized

body from its superior vena cava tip to inferior vena cava, since we try to avoid pulling the other end that impacted the right ventricular apex to avoid any injury to the apex or rupture to the tricuspid valve chordatindinea.

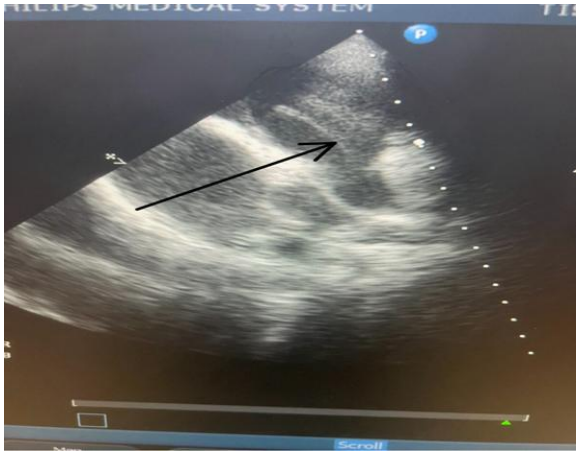

Figure 2: Echo study shows the foreign body in the right ventricle.

Then we introduced a 12 French cook delivery system to the inferior vena cava over a stiff guide wire (0.35 mm); then the dilator of this delivery pulled away, and a 6 French multipurpose catheter was introduced inside the delivery; finally, a snare kit catheter passed across this multipurpose catheter with multiple trails of snaring to the free end of the foreign body and eventually succeeded (Figure 3). Since the patient has ESKD, no dye is used in this procedure at all.

Figure 3: Snaring of foreign body into delivery system.

DISCUSSION

Embolized foreign bodies in clinical practice are rare and unusual complications; that's why clinical experience to handle such problems is not well established. Nevertheless, the plan of handling one case scenario might be completely different from other case scenarios. We claimed our cardiac center—Iraqi Center of Cardiac Disease—has a good experience dealing with such types of problems, so we receive multiple cases from other hospitals out of the medical city complex. In this specific case, it's a challenging duty due to two causes: first, the tip of the double lumen impacted the right ventricular apex, and it's contraindicated to try the snare kit in the cardiac apex. Second, the patient has chronic renal failure, so if any cardiac and/or vascular injury occurs during the procedure, the cardiac surgeon will do nothing due to the patient being unfit for general anesthesia, making the snaring process from the middle part of the double lumen a dangerous choice due to the high possibility of common iliac vein injury. That's why we used Cook delivery to complete the snaring process from inside the inferior vena cava. Till the time of receiving the patient in our center, there was no serious complication that occurred, but we consider the case as a super emergency to deal with.

Conflict of interests

No conflict of interest was declared by the author.

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Data sharing statement

Supplementary data can be shared with the corresponding author upon reasonable request.

REFERENCES

1. Watson LE. Snare loop technique for removal of broken steerable PTCA wire. *Cathet Cardiovasc Diagn*. 1987;13(1):44-49. doi: 10.1002/ccd.1810130109.
2. Supomo; Darmawan H. An unusual foreign body in the heart: A case report. *Ann Thorac Cardiovasc Surg*. 2018;24(4):205-207. doi: 10.5761/atcs.cr.17-00117.