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Aspiration Embolectomy in the Superior Vena Cava Thrombosis

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Abstract

Objective: Describe the evolution of infective thrombosis of the vena cava and removal of thrombus. **Study selection:** Case report.

Data synthesis: We present a case report of a critically ill patient complicated with infectious thrombosis of the superior vena cava. The patients developed sepsis, staphylococcal embolic pneumonia and multiorgan dysfunction. The patient underwent successful thrombectomy with aspiration catheter guided by transesophageal echocardiography. The patient remains completely asymptomatic month.

Conclusions: Aspiration thrombectomy could be a technique which, although novel, possible in these patients.

Keywords: Thrombectomy; Thrombus cava; Embolectomy

Introduction

The Infectious thrombosis of the superior vein cava is a rare complication in critical ill patients, but with high morbidity and mortality. Its management is not adequately resolved. We present a case report of a critically ill patient complicated with infectious thrombosis of the superior vena cava. The patients developed sepsis, Staphylococcal embolic pneumonia and multiorgan dysfunction. The patient underwent successful thrombectomy with aspirative catheter guided by transesophageal echocardiography. The patient remains completely asymptomatic month. Aspiration thrombectomy could be a technique which, although novel, possible in these patients.

Case Report

This is a 62-year-old patient, diabetic, smoker, hypertension, chronic eosinophilic cystitis, submitting to an enterocystoplasty (Bricket surgery) on a scheduled basis on 04/08/2010. After four days of an adverse postoperative, the patient was admitted to intensive care medicine (ICU) with dyspnea, fever of 39.8° leukocytosis, with progression to septic shock. This patient required resuscitation, and mechanical ventilation. Is performed a thoracic and abdominal CT, which demonstrates thrombosis of superior cava and jugular vein catheter. This complication may be related to prior jugular. Transesophageal echocardiography (ETE) was performed which showed an occlusive thrombus, mobile, reaching up to 3 cm of the right atrium, with a maximum anteroposterior diameter of 1.7 cm (Figures 1-3). *Staphylococci epidermis* was isolated repeatedly from blood cultures in four shots, was also isolated this organism in the catheter

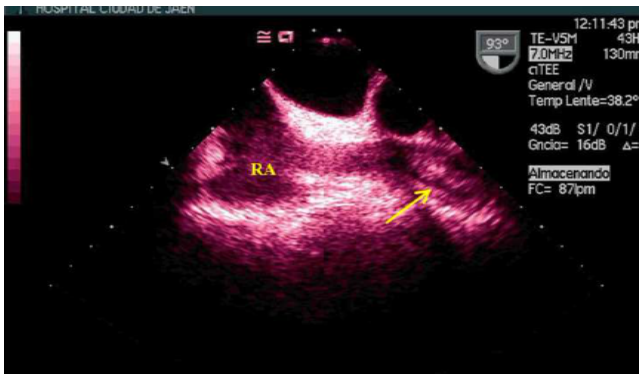


Figure 1: The arrow points to the superior vein cava thrombus.

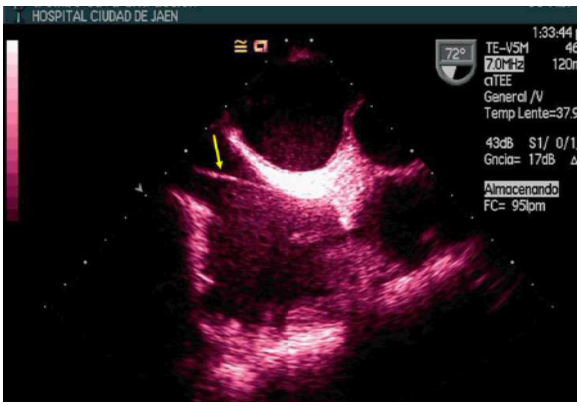
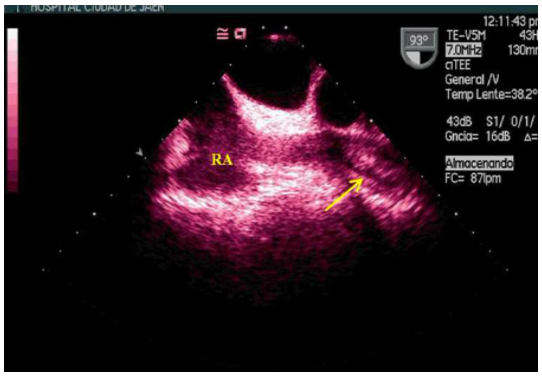


Figure 2: Thrombus located in right atrium and penetrating into the right ventricle. The arrow points to the thrombus.



Figures 3: Aspiration catheter, entering the inferior vena cava. The catheter is guided by TEE, faces the thrombus does suck.

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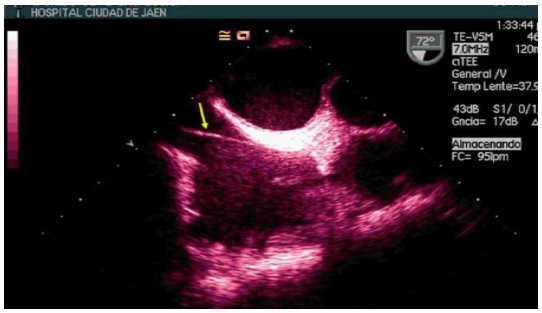

Figure 4: The arrow points to the aspiration catheter in right atria.

tip jugular. The patient was treated with daptomycin and fondaparinux. The evolution is inadequate, keeping septic shock. Right internal jugular vein ligation was performed. It also removed the thrombus from the inferior vena cava with thrombus aspiration thrombectomy, (pronto 0.35 extraction catheter®), on 30 April. During the transfer to the operating table hypoxemia occurs abruptly, and worsening of shock, extreme bradycardia and intense sweating requiring vasoactive support. By TEE evidence of thrombus migration atrium and right ventricle which fortunately is sucked through the catheter (Figures 2-4).

Thoracoabdominal CT was performed again postsurgical control, where it appears on surgical wound hematoma suprapubic that is drained. Both in the cultivation of superior vena cava thrombus and the abdominal hematoma isolate the same *Staphylococcus epidermidis*. Presents with bilateral pneumonia, acute distress syndrome, but after that embolectomy the patient initiates a positive trend that allows the withdrawal of mechanical ventilation on 14 May. In July, the patient was completely asymptomatic.

This case has several peculiarities, which we believe, make it unprecedented. The first is the dissection and jugular vein thrombosis as a complication of jugular access [1], which produced an occlusive thrombosis of the superior vena cava. Another interesting aspect is the importance of differential diagnosis, because the patient's expected complication was certainly capable sepsis in relation to surgery, but the finding was not expected anything. Despite antibiotic treatment with an optimal patient outcome was inadequate.

The monitoring of the thrombus by TEE was effective to see the increase in size, location and echocardiographic monitoring. Similarly was "irreplaceable" during thrombus extraction technique, which was held facing the catheter thrombus, addressing the catheter under echocardiographic continuous monitoring. After removal of the thrombus was performed right jugular vein with a Fogarty embolectomy (not getting results).

Although thromboembolectomy by Fogarty [2] is a potentially useful technique in this pathology in our patient was not initially possible, as a totally occlusive thrombus. The aspiration embolectomy has been used recently as a means to aspirate thrombus greenfield catheters, or arterial line. However, we believe it is the first time this technique has been performed successfully in this clinical situation [3,4]. We further believe that in critically ill patients could be a very promising technique. Similarly, we believe that monitoring by TEE is extremely useful [5].

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