

Superior vena cava thrombosis induced by chemotherapy port: About a case

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Abstract

Superior vena cava syndrome is secondary to obstruction of the superior vena cava and/or brachiocephalic venous trunk, which are currently common during venous catheterization (implantable chamber, dialysis catheter or during placement of an endocavitary stimulation lead).

We report the case of a 50-year-old patient with beta thalassemia who had been wearing a chemotherapy box for 2 years, and presented with clinically symptomatic superior vena cava syndrome.

A phleboscanner was ordered, showing a tight stenosis of the superior vena cava.

A double-approach angioplasty was performed with good postoperative results.

Keywords: Superior vena cava; Chemotherapy port; Endovascular treatment

1. Introduction

The superior vena cava syndrome is related to an obstruction of the superior vena cava and/or the brachiocephalic veins. The current frequent use of central venous catheterization for oncological or other reasons may increase the incidence of this syndrome [1]. Endovascular treatment has become an alternative to conventional surgical treatment with the increasing frequency induced by venous catheterization

2. Case report

We report the case of a 50-year-old female patient, followed for right breast cancer, who recently underwent the removal of a chemotherapy port positioned in the right internal jugular vein, which was placed 2 years ago. presented to the Emergency Department with a chief complaint of neck swelling for 10days with associated facial swelling. Upon questioning and clinical examination, the patient also exhibited symptoms strongly suggestive of superior vena cava syndrome, including cough, hoarseness,

A CT angiogram of the neck and chest was significant for an occlusive thrombosis in the left hemiazygos vein draining into the superior vena cava

It was decided to perform a cavography to attempt to treat this superior vena cava.

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2.1. Endovascular procedure

Under general anesthesia.

A 1.5 cm approach was made, centered on the left femoral vein, allowing a 5/0 Prolene bursa to be placed over the vein.

Puncture with a 6F introducer and insertion of a 0.35 guide which extends beyond the heart and comes up against the pre-occlusive stenosis of the superior vena cava, which is opacified with a long 7F introducer to show that there is a stenosis that cannot be crossed with a 35 guide.

An attempt was made to cross the stenosis with a guide 0.14, but this too failed.

So, we puncture the left internal jugular vein and insert a 6F introducer for additional phlebography, which will provide a clear view of the anatomy of this lesion.

Finally, we'll cross the lesion with a probe to position a guide from above in the femoral venous network.

A dual approach will be performed to invert the guide, which will have been recovered by means of a lasso, enabling angioplasties to be performed from below using a 14 mm balloon.

We'll stop here and use a Scoring balloon to lift the venous sclerosis and reinflate secondarily with a 14mm balloon to obtain a good result.

At the end of the procedure, the result is satisfactory.

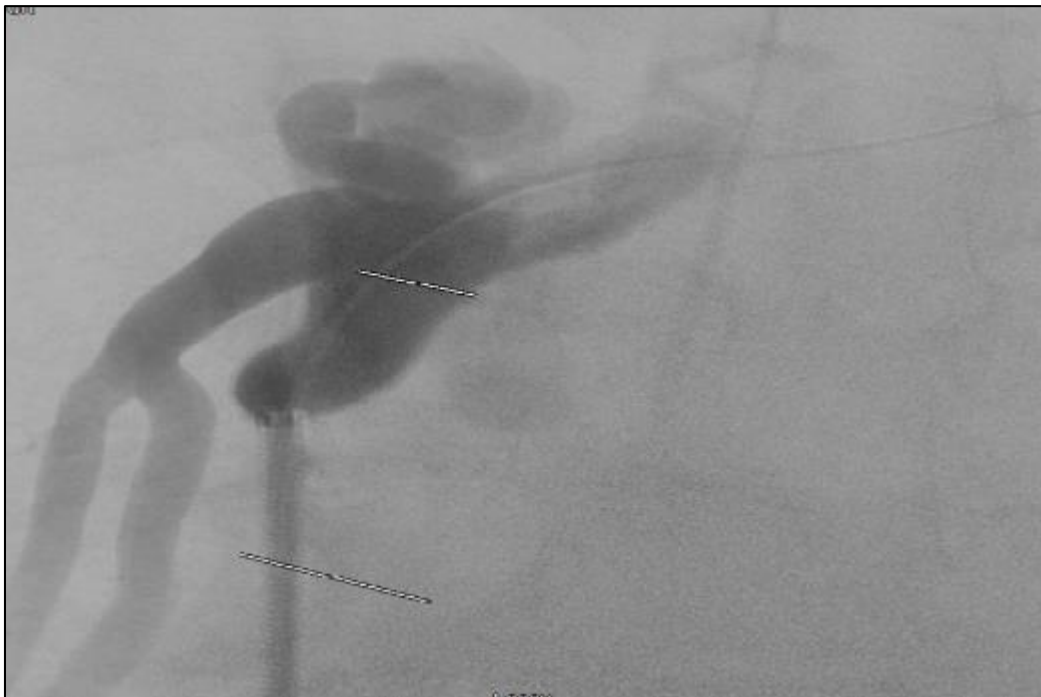


Figure 1 Intraoperative image before superior vena cava angioplasty

3. Discussion

Venous lesions caused by chemotherapy ports are typically severe and usually result from a combination of improper catheter positioning and the toxic effects of chemotherapy drugs [2].

Recent studies indicate that benign causes of superior vena cava syndrome may now represent up to 40% of cases [3]. This rise is primarily attributed to the widespread use of central venous catheters and pacemakers over the past twenty years.

Endovascular treatment is now frequently regarded as the first-line therapy; it rapidly alleviates symptoms by reestablishing venous return [4].

In many cases of superior vena cava syndrome, stent placement is recommended after angioplasty to improve patency. However, if the obstruction responds well to angioplasty, stent implantation can be avoided [5]. To date, very few studies have focused on the long-term outcomes of interventional approaches to superior vena cava syndrome [5].

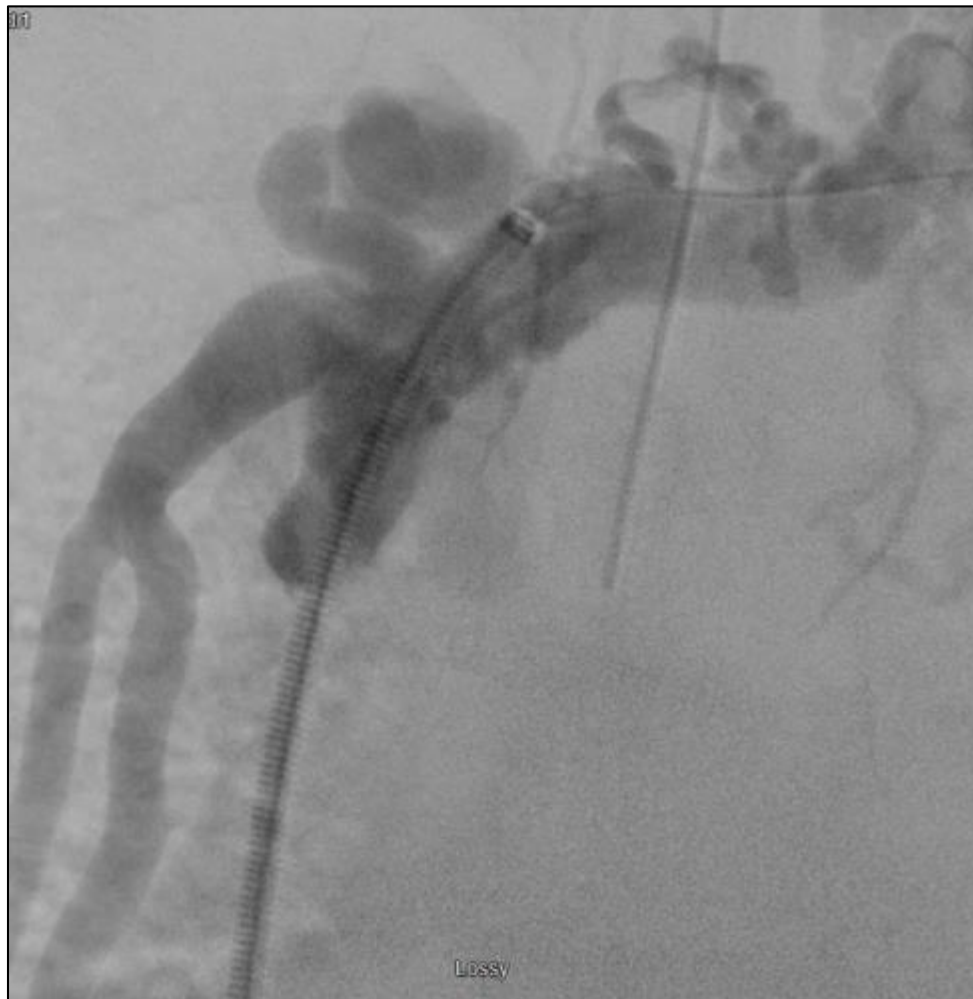


Figure 2 Intraoperative image after superior vena cava angioplasty

4. Conclusion

Nowadays, superior vena cava syndrome is generally encountered in patients who have undergone venous catheterization. Endovascular treatment currently holds a dominant position over conventional treatment in therapeutic management by almost instantly alleviating symptoms.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of ethical approval

'The present research work does not contain any studies performed on animals/humans subjects by any of the authors'.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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