Introduction

Percutaneous transluminal venous angioplasty (PTVA) is standard treatment of central venous disease (CVD). However, suboptimal results may occurred in case of external compression by bony structure and vascular structure. The commercial nitinol stents treated in arterial disease do not have enough radial force to against the external force. Sinus-Venous stent is a new designed nitinol stent for the venous pathology. Because of its high radial force, recent study showed good short term result after treatment in left iliac vein compression.

Methods

Restenosis rate and clinical result was estimated after Sinus-Venous stenting in a 43-years old lady presenting with refractory re-stenosis of the left brachiocephalic vein treated with PTVAs and nitinol stenting. Additional plain CT of upper chest was done in each follow-up to confirm improvement of external compression.

Results

We deployed 14mm/6cm Sinus-Venous stent inside the collapsed stent, covering the area of external compression. Final angiogram showed well patent along the Sinus-Venous stent to SVC without reflux to left internal jugular vein. Plain CT showed much decreased degree of external compression.

No restenosis at 3, 6, 12 and 14 month follow-up was observed. She could do hemodialysis well since the Sinus Venous stenting.

Conclusion

Sinus venous stent is the ideal stent for stenting in hemodialysis patient with CVD related to the external compression with excellent mid-term restenosis and clinical result.