

# Restoring central venous access in patients with central venous occlusion

## Abstract

**Background:** Hemodialysis patients with exhausted central venous access are a real clinical challenge.

Providing proper dialysis access is challenging surgeons because dialysis patients live longer and exhaust their access possibilities. There are just some case series with a small number of patients which suggest some innovative recanalization methods.

**Objective:** The purpose of this study is to describe a method of central vascular access that allows placement of Hemodialysis catheter in patients with complex thoracic central venous occlusions.

**Methods:** Thirty-eight patients with thoracic central vein occlusion were referred to obtain tunneled central catheter. We performed balloon-assisted puncture of internal jugular vein/supraclavicular region for tunneled central vein catheters (hemodialysis and central vein port system) in patients with thoracic central venous occlusion in outside-in technique. The Balloon was advanced in the supraclavicular level in either antegrade or retrograde fashion. After a successful percutaneous puncture of the balloon with an 18-gauge needle with a cranially inserted guide wire from the desirable supraclavicular region a central venous access would be established.

**Result:** All patients with thoracic central venous occlusion received successfully tunneled central venous catheter. There was 1 major complication (hemathothorax) in a patient with underlying coagulopathy. (Data collection and analysis is in progress)

**Conclusion:** Balloon-assisted puncture of internal jugular vein/supraclavicular region for tunneled central vein catheters in outside-in technique is potentially a reliable method in patient with thoracic central venous occlusion.