

FISTULA FAILURE LATE COMPLICATION OF CENTRAL LINE

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BACKGROUND

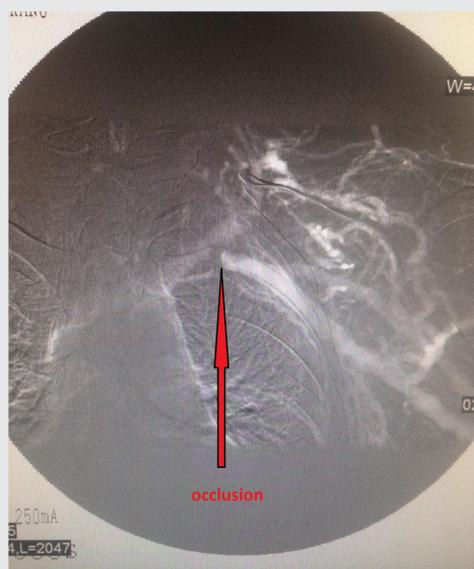
A patent and well maintained vascular access with optimal bloodflow is essential for the chronic hemodialysis treatment of an end stage renal disease (ESRD) patient. The major options for vascular access are arterio-venous fistula (AVF), arterio-venous graft (AVG) or tunneled central venous catheter (TCVC). The most optimal of the 3 is the AVF with good patency, low infection rate and higher longevity.

AVF can also have different complications such as hematoma, aneurism formation, infection, thrombosis or stenosis at different levels (around the anastomosis, on the venous side or on the central vein).

THE CASE

We present the case of a patient with a long standing history of insulin dependent diabetes mellitus who developed ESRD in March 2014 and was started on peritoneal dialysis modality at another dialysis center. Few months later he suffered a stroke resulting in left sided hemiparesis. PD was continued till February 2015 when the patient was admitted to ICU due to severe pneumonia requiring respiration. Decision was made at that time for transfer to hemodialysis and a cubital AV fistula on the non-dominant paretic left arm was created.

More than a year later swelling of the arm was noted and Duplex US showed good flow at the anastomosis and thrombosis of the cephalic vein. The thrombus resolved on anticoagulant therapy but the swelling was slowly increasing further over time.



INTERVENTION

Fistulography was then performed with radiocontrast injected into the venous arm of the AVF close to the anastomosis. The cephalic vein was open with good distal flow (picture 2). Image of the central veins revealed a complete occlusion of the left subclavian vein with a number of collaterals in the shoulder area and retrograde flow into the basilic vein (picture 3).

Percutan angioplasty was attempted but it was not successful. Finally the fistula had to be ligated in order to decrease the venous return flow.

SUMMARY

It was known, that the patient suffered a severe stroke in 2014 and he was hospitalized in Neurology ICU at another institute. Retrospective review of his previous charts revealed, that a central venous line in the left subclavian vein was used in neurology ICU for intravenous therapy while he was in severe condition with his stroke.

This subclavian line was the probable cause for the later occlusion of the subclavian vein. At that time the patient was on peritoneal dialysis and in serious overall condition, so less attention was paid for future vascular access. Knowledge of this information may have prevented creation of left sided fistula resulting in such complications.

