

CENTRAL VEIN STENOSIS IN HEMODIALYSIS PATIENT FIRST SUCCESSFUL ANGIOPLASTY TREATMENT

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A 60 year old female, resident of Mandsaur (M.P.) presented with progressive for last three monts. She was a case of end stage kidney disease (ESKD) on maintenance hemodialysis for last one year. She has left brachio-basilic arterovenous fistula (BB-AVF) as her dialysis vascular access.

Her initial angiography showed significant stenosis at the junction of left brachiocephalic vein and superior vena cava explaining clinical presentation. This lesion was angioplastied with a 14mm high pressures ATLAS ballon at 30 atm. Radiology results were optimal. Patient's symptoms began to improve within 24 hrs and she is asymptomatic 3 months after procedure.

Endovascular procedures for dialysis vascular access

Arteriovenous fistula (AVF) is life line for any hemodialysis patient. Creation and maintenance of dialysis fistula is an important aspect of management of ESKD patient. Endovascular procedures namely angioplasty and declotting have become standard of care for maintaining patency of AVF due to less invasiveness and repeatbility. However, cost still is prohibitive for general use.

This patient represents a useful application of endovascular procedure namely angioplasty to treat symptomatic central venous stenosis (CVS). CVS is a debilitating complication in hemodialysis patients as it becomes symptomatic after the placement of AVF. It is the first successful angioplasty for central venous

stenosis at GMCH, performed by Nephrologist. Risk factors for CVS are previous placement of central venous catheter and pacemaker wires, more with subclavian vein use than internal jugular vein use. The mechanism of CVS in such situation is catheter/wire induced trauma to vascular endothelium followed by inflammatory scarring leading to stenosis. These lesions are notoriously tight as compared to arterial lesions. Clinically,

CVS presents commonly as ipsilateral arm swelling with visible collaterals, difficulty in achieving hemostasis after cannulation for dialysis, clot aspiration by dialysis staff on needling and high venous pressure alarm on hemodialysis machine.



Treatment of this debilitating condition is either by endovascular or surgical. Endovascular treatment by means of angioplasty with or without stent is preferred due to its less evil nature. However, the drawback of this type of treatment is significant rate of restenosis which requires repeat procedure. On the other hand, surgical therapy is advised for those lesions which are not amenable to endovascular therapy. It is a major undertaking thus requires careful preoperative assessment.