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A 40 year-old woman with a history of hypertension, DM, Uremia on regular dialysis was referred from nephrologist due to malfunction of left radiocephalic AV fistula with higher venous pressure found. Angiography disclosed about 60% stenosis over arterial anastomosis. Cephalic vein was patent. Hence percutaneous transluminal angioplasty (PTA) was performed. A 6 Fr sheath was inserted retrogradely to cephalic vein and arterial lesion was crossed with a .035" Terumo wire then dilated with a 7.0/40 mm Wanda balloon at 6 atm. Brisk antegrade flow with adequate angiographic result was achieved. However, progressive left arm swelling was noted hence she re-visited our cath lab one week later. Angiography disclosed stenosis over innominate vein, which was missed on prior angiography. A 8 Fr sheath was inserted antegradely to cephalic vein and the lesion was crossed with a .035" Terumo wire then dilate with a 12.0/40 mm Fox balloon at 8 atm. Brisk antegrade flow with adequate angiographic result was achieved and pressure decreased from 40 mmHg to 20 mmHg after PTA. Arm swelling subsided in 3 days. Conclusion: In managing AVF malfunction, it is important to decide whether if it is an 'inflow problems' or 'outflow problems'. PTA to arterial lesion in a case with central vein stenosis without PTA to vein lesion may result in severe hyperperfusion syndrome and arm swelling.