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## **Evaluation of failing hemodialysis fistulas with multidetector CT angiography: comparison with conventional angiography**

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### **Case Study: BACKGROUND**

A functional AV fistula is the life line for Hemodialysis patient . Conventional angiography is the gold standard for the diagnosis of dysfunctional AV fistula . The objective of our study was to assess the diagnostic value of MDCT angiography in evaluation of failing AVF and compare it with conventional angiography .

### **MATERIALS AND METHODS**

Five patients referred for AV fistula dysfunction . Six MDCT angiography were performed . For MDCT angiography , contrast was administered (2ml/kg at the rate of 5 ml /second) via peripheral line in contralateral arm . Three of these patients also underwent a conventional angiography . The results were evaluated and the MDCT findings were compared with the findings of conventional angiography .

### **RESULTS**

Five patients ( 4 men and 1 women ) underwent MDCT angiography . One patient underwent MDCT angiography twice at different times . Mean age was 68.6 years ranging from 40 years to 70 years . The underlying renal disease was Diabetic nephropathy ( 2 ) , Chronic glomerulonephritis ( 2 ) , ADPKD ( 1 ) . Fistula types were mature BCADF ( 3 ) and RADF ( 2 ) . Most of the fistulas were being used for an mean duration of 2.2years ranging from 1year to 5 years . Indications for Evaluation was a suspected stenosis in three patients , steal phenomenon in two patients and aneurysm in one patient . MDCT angiography revealed stenosis of the central vein proximal to the AVF in two patients , thrombosis of the AVF and also extending into the central vein in three patients and pseudo-aneurysm formation in one patient . The findings in three patients who also underwent a simultaneous conventional angiography was same in both the imaging modalities

### **CONCLUSION**

MDCT angiography is a reliable , non invasive imaging technique for detection of stenosis or thrombosis in dysfunctional hemodialysis fistulas