SUMMARY

The aim of the present studies is to study color Doppler ultrasound (CDS) in assessment of patency of haemodialysis shunt and detection of its complication.

The study included 20 patients requiring primary access procedures for haemodialysis and attending the dialysis unit, Nephrology Department, Benha University Hospital. 12 patients had radiocephalic fistulae, 8 had brachiobasilic fistulae.

In this stud, the patients were examined with duplex sonography. In all patients F_{max} and F_{dias} were measured and RI was calculated at the fistulae and suspected sites of stenosis.

Thrombosis is the most frequent complication observed in this study. 5 of the investigated patients had thrombosis.

Venous outflow occlusion was detected in :

- The subclavian vein of one patient.
- The axillary and basilic veins of one paient.
- Basilic vein of one patient.
- The cephalic vein of one patient.
- The collateral veins of the forearm of one patient.

It is worthy to note that ipsilateral intravenous dialysis catheter was previously inserted in all the upper extremities present with proximal venous obstruction.

This study shows 3 cases of stenosis two of these patients had stenosis $\geq$ 50% stenosis was diagnosed at cephalic vein in one patient and at radial artery in the other patient.

One patient had stenosis $\leq$ 50% . senosis was diagnosed at the basilic vein.

Aneurysms were noted clinical in 2 patients. The aneurysms were formed in areas of repeated needle puncture sites.

The obtained results document that quantitative analysis of Doppler spectral recordings is of high value in detecting patency of the shunt and detection of it's complication.

It is recommended that, patients on regular haemodialysis, should be regularly screened (e.g., 3 months). This would help in detection of complication and its early management.