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بالرسالة صفحات

لم ترد بالأصل



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**ROLE OF COLOUR DUPLEX DOPPLER
ULTRASOUND IN EVALUATION OF DIABETIC
NEPHROPATHY**

THESIS

*Submitted for the Partial Fulfillment of the requirements
of the Master Degree*

In

RADIODIAGNOSIS

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالَ اللَّهُ تَتَلَوْنَهَا

وَيُحَدِّثُكَ عَنْهَا وَلَئِنْ لَمْ تَنْتَهِ

عَنِ الْقُرْآنِ لَنَزَعْنَاهُ مِنْكَ

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INTRODUCTION

INTRODUCTION

Diabetic nephropathy is a common cause of renal dysfunction. Renal changes associated with diabetes mellitus are complex ranged from early hyperfiltration with an increased glomerular filtration rate to late nephrosclerosis and fibrosis (Castellano I. et al., 2002)¹

In the clinically silent stage, there is no detectable proteinuria ($<20 \mu\text{g}/\text{min}$). The first sign of renal impairment is the presence of low quantities of albumin in urine (microalbuminuria $20\text{--}200 \mu\text{g}/\text{min}$) and it is known as incipient nephropathy stage. In about 80% of cases, the microalbuminuria is followed by progressive decrease in glomerular filtration and plasma renal flow lead to overt nephropathy (macroalbuminuria $>200 \mu\text{g}/\text{min}$). Azotemia and increased serum creatinine level are the results of advanced nephropathy (Ishimura E. et al., 1997)².

With conventional ultrasound (U/S), renal enlargement (in early stages of disease) and renal parenchymal loss (in later stages of disease) have been described, but these observation have limited clinical sensitivity and specificity to differentiated functionally normal from impaired kidneys in diabetic nephropathy (Platt J.F., et al 1994)³.

Searching for a more specific modality, duplex Doppler sonography is being used for further analysis as it has recently gained an increased popularity because of its capability for non-invasive characterization of blood flow and assessment of intrarenal haemodynamic abnormalities present in diabetes nephropathy (Matsumoto N. et al., 2000)⁴ and (Norris C.S. and Barnes R.W. 1984)⁵.

Flow resistance within renal parenchyma may be increased by a variety of pathological processes such as occur in diabetes mellitus. This is manifested as a decrease in the diastolic component of the Doppler waveform, which is measured by resistive, and pulsatility indices (Zwiebel W.J., 2000)⁶.

AIM OF THE WORK

AIM OF THE WORK

The goal of this prospective, laboratory controlled study is to evaluate the role of gray scale scan and duplex Doppler ultrasound in diagnosis and follow up patient with diabetic nephropathy.

**REVIEW OF
LITERATURE**