

## **The value of unenhanced Multi-detector computed Tomography versus three-Dimensional Ultra- sound In Evaluating patients with impaired Renal Function .And Hematuria**

### **Abstract**

Introduction: Unenhanced computed tomography (CT) is used to detect urinary tract calculi with high accuracy. The development of multi-detector CT (MDCT) .allows reconstructions in coronal, sagittal and oblique directions

Objective: To compare MDCT with three-dimensional (3D) ultrasound (US) .imaging in evaluating patients with impaired renal function and hematuria

Patients and methods: A total of 55 patients with hematuria and impaired renal function were examined with unenhanced MDCT and 3D US imaging at Al-Fayoum .University Hospital between March 2008 and April 2010

Results: The diagnosis on unenhanced MDCT was urolithiasis in 25 patients, psoas abscess with perinephritis in 2, chronic cystitis in 3, prostatic enlargement in 4, renal mass lesions in 3, vesical masses in 4, renal trauma in 2, adult polycystic kidney disease in 1, renal vein thrombosis in 1 and no specific abnormality in 10 patients. In diagnosing the cause of hematuria, the sensitivity was 82% for CT versus 73% for US. This can be attributed to the high sensitivity of CT (100%) in the diagnosis of urolithiasis, which is a common cause of hematuria. In the diagnosis of other causes of hematuria the sensitivity was 66% for CT versus 77% for US. The combination of MDCT and US increased the sensitivity to 87%