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بالرسالة صفحات

لم ترد بالأصل

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DOPPLER ULTRASOUND: EVALUATION OF URETERIC JETS AS A NOVEL MEASURE IN DIAGNOSIS OF URETERIC OBSTRUCTION

Thesis
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introduction

INTRODUCTION

The intravenous urogram has long been the primary imaging modality in assessing acute renal obstruction. Newer ultrasound techniques including pulsed and Color Doppler allow the physiology of urinary system to be interrogated via the resistive indices and ureteral jets, to determine whether these new techniques would improve the ability of ultrasound to assess acute ureteral obstruction *(Deyoe et al., 1995).*

Color Doppler sonography holds promise as non invasive means of investigation and in particular, of confirming or excluding ureteric obstruction. To date, reported work with Color Doppler sonography in obstruction, has been based entirely on the presence or absence of Jets, subjective assessment of flow patterns, and relative frequency of jets *(Cox et al., 1992).*

When a Doppler sample volume cursor is placed onto the jets a characteristic signal can be obtained, even when the jet is not seen at conventional sonography, Color Doppler flow imaging is more sensitive in demonstrating flow than gray-scale real time U/S and facilitate location of the ureteric orifice *(Jaquier et al., 1990).*

A number of theories have been proposed to explain why urine flowing into the bladder generates a reflection that can be detected with sonography. Potential sources of reflections

include microbubbles particulate matter in urine, temperature differences between ureteral urine and bladder urine and development of turbulence or cavitation at the ureteral orifice. The most widely accepted current explanation is that the reflections are generated by differences in density between urine in the bladder and urine in the ureter *(Burge et al., 1991).*

Color Doppler U/S of the ureteral jets is an available tool in urinary colics because it yields in real time more precise of functional information than radiograph and B mode U/S and also demonstrate the grade of urinary obstruction *(Catalano et al., 1998).*

Aim of the work

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The purpose of this study is to evaluate patients with renal colic by ureteric jets in Doppler U/S.