Role of Two Dimensional Trans-abdominal Ultrasound and Doppler Ultrasound in the diagnosis and differentiation of gut wall lesions

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ABSTRACT

BACKGROUND:

Compared with computerized tomography, magnetic resonance imaging, and capsule endoscopy, ultrasonography (US) of the bowel is cheap, portable, flexible and user- and patient-friendly, with image data of high resolution; also Doppler imaging has been described as helpful in a variety of gastrointestinal disorders.

OBJECTIVE:

The study aimed at assessment of the ability of trans-abdominal US and Duplex Doppler US to localize and suggest the nature of different causes of gut wall lesions.

METHODS:

A total of 60 patients with symptoms suggestive of bowel lesions were subjected to trans-abdominal bowel wall US with emphasis on bowel wall thickening; its site, maximum diameter, length of the affection and wall stratification. Also Doppler examination was done to determine volume of blood flow, resistive and pulsatility indices of superior mesenteric artery and portal vein, together with resistive index of mural blood flow in the affected segment. Results were compared to histopathology, obtained through endoscopy, ultrasound or sometimes laparotomy.

RESULTS:

US accuracy in detection of site of lesions was100%, and in suggestion of the nature of lesions was 86.67%. Differences between malignant and inflammatory lesions as regards bowel wall thickness, wall stratification, and length of affection were statistically highly significant. Resistive and pulsatility indices of superior mesenteric artery (SMA) of control group compared to study group were the only significant Doppler values.

CONCLUSION:

US is a fast, efficient, safe and cheap way of examining various bowel lesions.

KEY WORDS: Ultrasound, Doppler, Bowel lesions

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"GOD"

THE KINDEST

&

THE MOST MERCIFUL.

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