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Audit of the accuracy of ultrasound in the localisation of undescended testes in children

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Abstract

Background: There has long been debate surrounding the application of ultrasound (US) in the evaluation of undescended testes (UDT), with the current consensus showing that it doesn't have an application in the routine evaluation of the condition. More recent papers have shown that US does have some utility in this area. It is accepted that diagnostic laparoscopy is the gold standard investigation for non-palpable UDT, however, more recent studies have shown Ultrasound scans are becoming more accurate. This project looked at the ability of ultrasound to correctly locate UDT in children at a UK district general hospital when compared to surgical findings.

Methods: The electronic notes of 12 children who were evaluated with ultrasound and surgical correction for cryptorchidism between November 2021- December 2023 were reviewed. The location of testes were noted on clinical examination and ultrasound which were compared to the surgical findings. The sensitivity and specificity of US were then calculated, as well as the positive predictive values.

Results: A total of 9 boys with 10 undescended testes underwent preoperative ultrasound scanning and surgical correction in this study. Eight of these were unilateral and 1 bilateral. None of the boys were found to have absent or intraabdominal testes. One testis was found to be scrotal on operative findings. All of the testes were palpable on examination under anaesthetic. The sensitivity of US was calculated at 100% (p=0.05), specificity at 90% for locating inguinal UDT.

Conclusions: Based on this study, ultrasound has a high sensitivity and specificity at locating inguinal undescended testes. More research with larger sample sizes should be undertaken in this area to fully assess the utility of modern ultrasonography in the evaluation of cryptorchidism.

Keywords: Ultrasound | Localisation | Undescended | Testicles

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