Institutional Use of Ultrasound in the Evaluation of Cryptorchidism

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IRB Number: 2017

Describe role of Submitting/Presenting Trainee in this project (limit 150 words): Study design, data collection, data analysis and interpretation, abstract writing

Background, Objectives/Goal, Methods/Design, Results, Conclusions limited to 500 words

Background: In 2014, the American Urological Association guidelines recommended against the performance of ultrasound and other imaging modalities in the evaluation of patients with cryptorchidism prior to expert consultation. We hypothesized that ultrasound remains overused by referring physicians.

Objectives/Goal: We aimed to examine our institutional experience and measure adherence to currently available guidelines.

Methods/Design: An institutional review board (IRB) approved retrospective review of ultrasound utilization in the evaluation of patients with cryptorchidism was performed from June 1, 2016, to June 30, 2018, at a single tertiary level pediatric hospital.

Results: We identified 1002 patients evaluated in surgical clinics for cryptorchidism. Surgical intervention was performed in 99% (n=997) of the entire cohort. Of those who required an operation, intra-abdominal testes were identified in 64.4% (n=642) with 31% of those being testicular remnants and were excised. Groin/scrotal exploration was required in 35.6% (n=355); 88.7% (n=315) were normal testes and underwent orchiopexy, while 11.3% (n=40) required orchiectomy.

Ultrasound was performed in 39.7% (n=398), most of which were ordered by referring physicians (89.4%, n=356). Of those that received an ultrasound, surgical intervention was performed in
98.7% (n=393). Those 5 patients (1.3%) who did not undergo surgical intervention were referred with ultrasounds showing inguinal testes, however, all had normal physical examinations at the time of consultation and were discharged from the outpatient clinic. All patients without an ultrasound underwent surgical intervention (n=594).

Conclusions: Ultrasound evaluation of patients with cryptorchidism continues despite high-quality evidence-based guidelines that recommend otherwise. These studies do not influence the surgeon’s decision to operate or the type of operation. Education of referring physicians and radiologists is essential to improve adherence.