

ULTRASOUND EVALUATION OF LOWER URINARY TRACT AND PERINEO-ENTEROCELE

Hypothesis / aims of study

Ultrasound (US) is non-invasive method and convenient to get dynamic image. Nevertheless, US has some problems for evaluation of lower urinary tract, such as difficulty of display of bladder neck. We have performed trans-perineal US in the upright-position in 186 cases, that is more physiological approach with little contact pressure against urinary tract and in some cases those have large cystocele including the tea-pot type one US had been performed in a little slouch posture. In addition, anal contraction procedure was performed that facilitates visualization of urethra. The aims of this study are to investigate the utility of trans-perineal US for evaluation of lower urinary tract and concurrent existence of perineo-enterocele in genital prolapse.

Study design, materials and methods

During trans-perineal US, convex type probe, 3.5MHz, had been attached at the back of cases whose fluid content in the bladder is more than 200ml and who stand opening the legs at the breadth of their shoulders. The trans-perineal US had been performed in 186 cases including 75 cases with GSI, 5 with OAB, and 34 with huge cystocele. The mean age of those are 61.7 (SD: 11.1) and body mass index (BMI) are 23.4 (SD: 3.3). The present study designs are the follows; (1) comparison between chain cysturethrography (CCG) and US in 18 cases with GSI, (2) examination of any correlation between severity of GSI and extent of funnelling formations of vesical neck in 75 cases, and (3) evaluation of funnelling formations of vesical neck in large cystocele and perineo-enterocele in genital prolapse (n=34). In the statistical analysis student *t* test, kai square test and *U* test was used.

Results

(1) A high correlation between CCG and US was observed in PVU angles (coefficient ratio: 0.937) and the concurrence of funnelling formations between two methods was revealed. (2) A high correlation between severity of GSI and funnelling formations of vesical neck in the US examinations was shown. (p=0.983) (3) Funnelling formations were observed in 2 cases with GSI, whereas, the rest with tea-pot type cystocele (n=5) were continent after repair. There were no cases with perineocele in this study.

Interpretation of results

These results show that US is equal to CCG in the respect of evaluation of lower urinary tract. Additionally, in cases with large cystocele US is useful for evaluation of latent GSI and perineo-enterocele.

Concluding message

With arrangement of posture or contraction procedure for visualization of lower urinary tract, especially urethra itself, trans-perineal US shows a great utility for evaluation of GSI and genital prolapse.

FUNDING: NONE

DISCLOSURES: NONE

HUMAN SUBJECTS: This study did not need ethical approval because this is one technique in clinical examination but followed the Declaration of Helsinki Informed consent was obtained from the patients.