

VOIDING PATTERNS OF HEALTHY INFANTS AND THOSE WITH RECURRENT URINARY TRACT INFECTION

Aims of Study

To determine and compare voiding patterns of healthy infants and those with recurrent urinary tract infection

Methods

This is an analytical, cross sectional study on pediatric patients aged 1-24 months from March 1999 to March 2000 on a tertiary training hospital. The study includes 100 subjects, Group I (50 subjects) are those with recurrent urinary tract infection (neurologically intact, other anomalies were ruled out by ultrasound and voiding cystourethrogram) and Group II (50 subjects) are healthy infants. During 24 hour period, all micturitions were recorded in terms of voiding frequency, volume and character of voiding. The observation was completed with three ultrasound guided determination of residual urine volume done by a single sonologist who did not know the diagnosis of each case.

Voiding patterns in terms of mean voiding frequency, mean volume per voiding, mean functional bladder capacity, character of voiding and mean residual urine volume in millilitres were determined. The two groups were compared using T test with p value of <0.05.

Results

The mean voiding frequency is 17.1 (SD+/- 7.5) in group I and 13.5 (SD+/- 5) in group II (p value 0.009). The mean volume per voiding is 33.0 milliliters (SD+/- 15.2) on group I and 40.1 milliliters (SD +/- 37.4) in group II (p value 0.27). The mean bladder capacity is 44.0 milliliters (SD+/- 29.5) in group I and 66.5 milliliters (SD+/- 29.4) in group II (p value 0.00). In group I, 28% showed interrupted voiding pattern compared to none in group II (p value 0.00). The mean residual urine volume for group I is 7.97 milliliters (SD+/- 7.5) and 6.06 milliliters (SD+/- 6.6) in group II (p value 0.183).

Conclusions

The voiding patterns of pediatric patients with recurrent urinary tract infection were significantly characterized by increased frequency, decreased functional bladder capacity and interrupted voiding. Mean volume per voiding was also decreased in those with recurrent urinary tract infection but not significant. There was no significant difference in the residual urine volume in those with recurrent urinary tract infection when compared to those of healthy infants.