

FREQUENCY VOLUME CHARTS- COMPARISON OF ONE, THREE AND SEVEN DAY CHARTS

Aims of Study

Frequency volume charts (FVC) are indispensable investigative tools in the urological practice. They are important in providing an objective evidence of the changes in subjective symptoms. FVC have evolved over the past 25 years, from simple voiding charts to complex urinary diaries, which not only record frequency, volume, episodes of stress and urge incontinence, fluid intake but also the patients activities in relation to their urinary symptoms. Presently these complex charts are being analysed with the help of computerised software that also provide a printed detailed report of FVC. There have been many studies to assess the reliability of FVC in the clinical diagnosis. However, the subject regarding the ideal time period for which a frequency volume chart should be maintained is open for debate. The objective of this study is to compare the diagnostic capability of FVC maintained for 1, 3 and 7 days using 12 parameters.

Methods

We studied 54 patients, who were being investigated for nocturia and other lower urinary tract symptoms (LUTS). Patients were requested to complete a FVC for 7 consecutive days. These FVC were then analysed into three different categories – 1day (day1), 3 day (day2 to 4) and 7 day. The 1day FVC analysis included the first morning void on day 2. The analysis of 3 day FVC included the first morning void on day 5, similarly the 7-day FVC analysis included the first morning void on day 8. The 12 parameters included were day time frequency, night time frequency, 24 hour frequency, day time urine out-put, night time urine out-put, 24 hour urine out-put, maximum voided volume, nocturia index, urine in millilitre per kilogram body weight, urine in millilitre per minute, ratio of night time urine out-put to 24 hour urine out-put and night time to day time diuresis ratio. The last 3 parameters were used to assess nocturnal polyuria.

Results

There was no statistical ($p=0.16$) or clinically significant difference in the parameters obtained by comparing the one-day, three day and seven day FVC. However, minor variations in the parameters were noticeable when 1 day FVC was compared with 7 day, while the 3-day and 7 day analysis were identical.

Conclusions

A properly performed one day FVC which includes the first morning void the following day is adequate to gain insight into the voiding habits during normal daily routine. 3 day FVC is useful for accurate assessment of LUTS and recommended for confirming a consistent clinical pattern. There is no role for 7 day FVC in routine clinical practice and their use should be restricted to atypical clinical scenarios and for clinical research.