

DIFFERENCES IN VOIDING PATTERNS BETWEEN NOCTURICS AND NON-NOCTURICS IN A URINARY INCONTINENT PATIENT GROUP

Aims of Study

The aim of this study is to assess the difference between nocturics and non-nocturics in several parameters abstracted from the frequency volume (FV) chart.

Methods

From the beginning of 2002, all patients visiting a uro gynaecologic practice with complaints of urinary incontinence were analysed according to a specific protocol. They were asked to complete a standardised questionnaire consisting of the urinary distress inventory (UDI), the incontinence impact questionnaire (IIQ) and general quality of life questions from the EORTC QLQ-C30. These are all validated for the Dutch situation. They also underwent multichannel urodynamic testing and a 1-hour ICS-padtest. In addition they had to complete a three-day frequency-volume (FV) chart. The mean values of the parameters from the three days were computed by SPSS. Nocturia was defined as two or more micturitions per night calculated from the FV-chart.

Results

Hundred and twenty incontinent patients were included.

Patients with nocturia were compared with non-nocturics in relation to several parameters abstracted from the FV-chart. The results are shown in table 1. The total (24-h) frequency was significantly higher ($p=0,006$) in nocturics than in non-nocturics, in contrast to the daytime frequency. The maximum voided volume was significantly less ($p=0,002$) in nocturics than in non-nocturics, indicating a smaller functional bladder capacity. The difference in mean cystometric capacity (over two cystometric measurements) however wasn't significant. The Pearson correlation coefficient between mean nocturnal frequency and mean cystometric capacity was computed. There was a significant negative correlation ($-0,28$; $p<0,01$), indicating that patients with more severe nocturia have a smaller bladder capacity.

The total daytime urine production was significantly less ($p=0,037$) in nocturics than in non-nocturics, in contrast to the 24-h production which differed hardly.

Nocturics lost significantly ($p=0,038$) more urine during the padtest than non-nocturics.

Table 1: Student's T-Test for the means of several parameters abstracted from the FV-chart

Measurement:	Nocturia	No nocturia	p-value
Daytime frequency	8,9	8,24	0,390
24-h frequency	11,2	8,88	0,006
Cystometric capacity (ml)	474,7	494,3	0,53
Maximum voided volume (ml)	332,2	448,3	0,002
Total daytime production (ml)	1466,7	1836,8	0,037
24-h production (ml)	2054,8	2095,1	0,831
ICS padtest (mg)	39,7	13,1	0,038

Conclusions

It appeared that women with nocturia had a significant higher 24-h frequency than non-nocturics. The difference however, could be explained by the additional nocturnal frequency.

The mean nocturnal frequency for nocturics was 2,3. This suggests that nocturia in these women is not a symptom of generalised bladder overactivity.

Total daytime production was less in nocturics compared with non-nocturics although there was almost no difference in 24-h production. It appears that nocturia is a correlate of nocturnal polyuria.

Nocturics loose significantly more urine during the padtest. This might be another explanation of the smaller daytime production.

The difference between cystometric capacity and maximum voided volume was much greater in nocturics (142,5 ml.) than in non-nocturics (46 ml.).