

THE EFFECTS OF DESMOPRESSIN ON NOCTURNAL URINARY VOLUME IN PATIENTS WITH ORTHOTOPIC NEOBLADDER

Aims of Study

It is well known that orthotopic neobladder (ON) causes the loss of bladder sensitivity obliging the patients to void in predetermined times during the 24 hours, with particular discomfort in the night and consequent worsening of the quality of life. Actually, it is not clear whether these patients are affected by polyuria and whether the administration of desmopressin can reduce the need to wake up during the night. Aim of this study was to verify the nocturnal urinary volume in patients who underwent ON in comparison with controls and to evaluate whether desmopressin, administered shortly before going to bed, produces in the pathological group a significant reduction of the nocturnal urinary volume.

Methods

We studied 13 patients aged between 53 and 79 years (mean age 72 years) with ON and 8 normal volunteers aged between 18 and 86 years (mean age 65 years) without disorders affecting the lower urinary tract. All subjects signed informed consent. The study protocol consisted of two phases. In the first phase the evaluation of the total nocturnal urinary volume (it was calculated according to the sum of the urinary volume produced during each wake-up when expected) without administration of desmopressin was performed both in the group of normal volunteers and in the pathological group. In the second phase we administered, only to the pathological group, 0.2 mg of oral desmopressin at 11.00 p.m. with an evaluation of the total nocturnal urinary volume as carried out in the first phase. The Mann-Whitney test was performed to define the statistical differences concerning the total nocturnal urinary volume, between the group of normal volunteers and the pathological group. The same statistical analysis was carried out to define any differences in the pathological group in relation to the total nocturnal urinary volume before and after administration of desmopressin ($p < 0.05$ was considered significant).

Results

They are reported in table 1. The statistical analysis revealed no difference concerning total nocturnal urinary volume production between normal volunteers and the pathological group without administration of desmopressin ($p=0.238$) and a significant difference concerning total nocturnal urinary volume production between the pathological group without administration of desmopressin and the pathological group with administration of desmopressin ($p=0.004$).

| Total nocturnal urinary Volume (ml) | | |
|---|---------|--------|
| Normal volunteers | Mean | 661.25 |
| | Mean SE | 67.52 |
| | SD | 190.97 |
| Pathological group without administration of desmopressin | Mean | 793.08 |
| | Mean SE | 80.9 |
| | SD | 292.0 |
| Pathological group with administration of desmopressin | Mean | 484.23 |
| | Mean SE | 4.97 |
| | SD | 163.55 |

Tab.1

Conclusions

Our results showed that the patients who underwent ON do not modify the total nocturnal urinary volume production in comparison with normal volunteers. The desmopressin determined a significant reduction of total nocturnal urinary volume production in the pathological group compared to the same group without desmopressin administration.