

ORAL DDAVP AND QUALITY OF LIFE IN PATIENTS WITH ORTHOTOPIC NEOBLADDER : A PRELIMINARY REPORT

Hypothesis / aims of study

ADH is a hormone produced by pituitary gland affecting blood pressure and diuresis. ADH secretion is due to the increase of oncotic pressure of plasma, decrease in volume and some other factors such as stress, pain, decrease in partial oxygen pressure in arterial blood, and some drugs such as acetylcholine, morphine, barbiturate, nicotine (1). A previous study has discovered that patients who underwent to radical cystectomy for the construction of an orthotopic neobladder (ON) did not have modifications in nocturnal urinary volume (NUV) and that NUV is reduced as in healthy controls by oral administration of synthetic DDAVP (2). We know that patients with ON are obliged to void nightly twice or more by abdominal straining with high discomfort for quality of life (QoL). Aim of the present study was to evaluate QoL in patients who underwent ON and determine whether the assumption of DDAVP could reduce NUV and night time frequency.

Study design, materials and methods

We enrolled 10 patients (7 men and 3 women) with a mean age of 67.6 years (range from 59 to 78) who underwent to radical cystectomy with the construction of an ileal ON (five W-shaped ONs and five Studer's ONs). The mean follow-up was 4 years (range from 1 to 14 years). All patients had no pathologic blood and urine examination, no cardiovascular, hepatic, and renal disease. They were non-smokers, and did not take drugs which could interfere with endogenous ADH secretion. All patients were informed of the aim of the study and ethical approval was obtained from our institution. We developed the study in 2 phases. In the first phase we suggested all patients to record their NUVs for 7 days, to make a note of the number of night time frequency to void their reservoirs and finally to make self-writing in office questionnaires about their quality of life by the IQoLA-SF 36 Italian validated version. In the second phase we administered 0.2 mg of oral DDAVP daily at 11 pm for 4 weeks asking the patients to record NUVs and the number of night time frequency during the last week of drug assumption. On the last day of DDAVP assumption they were asked to fill in the questionnaires, as previously reported, to define their QoL. Statistical differences on NUVs, number of night time frequency and QoL between before and during DDAVP administration were analyzed by Student's t test.

Results

NUVs decreased during administration of ADH in all patients ($p < 0.05$) with a significant increase of the number of night time frequencies ($p < 0.05$) (Tab.1-Tab.2). DDAVP administration showed no significant improvement of QoL.

Interpretation of results and concluding message

These data show that, after the administration of DDAVP, QoL did not improve in patients who underwent ON and that paradoxically the number of night time frequencies increased even if the reduction of NUVs could have prevented these patients from voiding during night. Probably, in these patients, the habit of voiding during night had so deeply modified their sleeping and waking rhythm that getting into a new habit was very difficult.

On the contrary, the increase of night time frequencies could be explained by performance anxiety. In conclusion we believe that the administration of DDAVP should be started within the first three months after surgical operation allowing the patient to get into the new voiding habit as soon as possible.

	Mean (ml)	SD
NUVs in all patients without DDAVP for one week	4962.5	801.0
	P< 0.01	
NUVs in all patients with DDAVP for one week	4086	725.5

Tab 1: NUVs

	Mean (No.of times)	SD
night time frequency without ADH for one week	14.7	5.1
	P< 0.05	
night time frequency with ADH for one week	16.8	5.2

Tab 2 : Numbers of night time frequency