Abstract 516 POTASSIUM CHLORIDE TEST AS A POSSIBLE PREDICTOR OF HYDRODISTENTION EFFICACY IN PATIENTS WITH BLADDER PAIN SYNDROME/INTERSTITIAL CYSTITIS

GÜLPINAR Ö[1], ESEN B[1], AKPINAR Ç[1], BAKLACI U[1], GÖKÇE M I[1], SÜER E[1], BEDÜK M Y[1]

1. Ankara University Department of Urology

AIMS OF STUDY

The purpose of this study is to present the efficiency of hydrodistention in patients with bladder pain syndrome / interstitial cystitis (BPS/IC) and to determine a possible role of potassium chloride test to predict hydrodistention(HD) success in this patient group.

MATERIALS AND METHODS

A retrospective analysis was performed on 34 patients who underwent both potassium chloride test before diagnostic cystoscopy and hydrodistention afterwards by a single surgeon between June 2013 and April 2017. Hydrodistention was performed under sedation for 8 minutes at a pressure of 60 cmH20. All patients were evaluated for visual analogue score(VAS), voiding diary for frequency/nocturia and mean urine volume per void before hydrodistention, post-HD 1. month and post-HD 6. months. A reduction two or more on VAS of pain was considered as response to treatment. Fisher exact test was used for statistical analysis.

Table 1. Pre-HD and post-HD 1. month parameters

Parameters	Before HD	Post-HD 1. month	p value
Visual Analogue Scale	9 (6-10)	5 (1-9)	p<0,05
Frequency (24 hr)	13,33 (5-30)	10,66 (3-20)	p<0,05
Nocturia	2 (1-5)	1 (0-4)	p<0,05
Mean voided volume (ml)	142 ml (min:42 max:346)	154 ml (min:62 max:354)	p>0,05

	Post-HD 1. month		p value	Post-HD 6. month		p value
	Kcl test -	Kcl test +		Kcl test -	Kcl test +	
HD responsive	3	21	0.0314	1	8	0.403
HD non-responsive	5	5		7	18	

Table 2. Kcl test results and response of BPS/IC patients to hydrodistention at post-HD 1. month and 6. month

RESULTS

Mean age of the patients was 42.8 (28-72). Median time interval between initiation of symptoms to hydrodistention was 60 months.(6-238). Mean follow-up period after hydrodistention was 39 weeks(24-96). Potassium chloride test was positive for 26 patients.(26/34; 76.5%) At post-HD 1. month; 24 patients were responsive(24/34; 70.5%) to treatment and 10 patients were non-responsive. Visual analogue scale of pain, frequency, nocturia and mean voided volume results both before HD and post-HD 1. month are summerized in Table 1. Of 26 patients with positive KCL test; 21 was responsive to HD, 5 was non-responsive whereas of 8 patients with negative KCL test; 5 was non-responsive and 3 was responsive to HD. At post-HD 1. month KCL test positivity was found statistically significant predictor of HD success.(p=0.0314) At post-HD 6. month; 9 patients(9/34, 26.5%) were still responsive to HD. Of this 9 patients; 8 were KCL test positive and 1 was KCL test negative(p=0.403)(Table 2). No severe adverse effects were noted.

INTERPRETATİON OF RESULTS

Hydrodistention is frequently used diagnostic and therapeutic tool in patients with BPS/IC. Significant improvement in symptom scores following hydrodistention has been reported in literature in short term follow up(1). Efforts to predict hydrodistention efficacy according to symptoms of patients failed previously(2). In this trial, potassium chloride test was found as a predictor of hydrodistention efficacy. Pain during potassium chloride test was hypothesized to be associated with abnormal urothelial permeability or hypersensitivity of sensory nerves. Either way it is reasonable to expect greater damage of mucosal afferent nerves following hydrodistention in patients with positive potassium chloride test, resulting to better improvement of symptoms in short term follow up.

CONCLUSIONS

BPS/IC patients with positive KCL test can be more susceptable to damage of mucosal afferent nerve endings resulting to a better benefit with hydrodistention. In this study; KCL test was shown statistically as a successful predictor of hydrodistention efficacy for post-HD 1. month but not for post-HD 6. month; possibly due to relatively short duration of efficacy shown for HD. Larger prospective trials are requiered to provide a definitive conclusion on the relation between potassium chloride test and hydrodistention efficacy.

REFERENCES

1. Rigaud J, Delavierre D, Sibert L, Labat JJ. [Hydrodistension in the therapeutic management of painful bladder syndrome]". Prog Urol 2010;20:1054-1059.

2. Cole EE, Scarpero HM, Dmochowski RR. Are patient symptoms predictive of the diagnostic and/or therapeutic value of hydrodistention?". Neurourol Urodyn 2005;24:638-642.