

IMPROVEMENTS IN PATIENTS' QUALITY OF LIFE FOLLOWING TREATMENT WITH INTRAVESICAL HYALURONIC ACID (CYSTISTAT 40MG) FOR PAINFUL BLADDER SYNDROME AND RECURRENT UTIS

Hypothesis / aims of study

Intravesical Cystistat is indicated for a variety of chronic cystitis conditions including painful bladder syndrome (PBS), recurrent bacterial UTIs (rUTI) and radiation or chemical cystitis (1,2). However, to our knowledge, there is very little literature referencing patient reported outcomes using quality of life criteria following treatment with Cystistat.

The aim of this study was to assess, using a valid scoring tool, the improvement in patients' quality of life following treatment with Intravesical Cystistat when managed according to routine clinical practise within our department.

Study design, materials and methods

All patients recommended to commence treatment with intra vesical hyaluronic acid instillations, by any of the four consultants in our department, for either PBS (as diagnosed by the consultant) or rUTI were asked to complete a Kings Health Questionnaire (KHQ) prior to start of treatment. Prior investigations and diagnostic definitions were not standardised, but reflected the consultants' usual clinical practise.

Patients were treated initially with 6 weekly instillations of cystistat by one of two specialist urology nurses, with a particular interest in bladder disorders. If the patient felt treatment was effective the frequency of further instillations was continued on an individualised basis every 2, 3 or 4 weeks, reducing in frequency as possible and continued for up to 6 months.

KHQ scores were repeated after 6 weeks, and again after 6 months.

Any patient who chose not to continue with instillations before or beyond the initial 6 week course was deemed a treatment failure. Analysis of pre treatment and post treatment KHQ scores (totals and for individual domains) were analysed statistically with the Student paired t test.

Results

20 patients (18 female, 2 male) were included in the study, being all the patients commenced on cystistat for PBS (8 patients) or rUTI (12 patients) within the study period.

Out of 20 patients, there were 4 treatment failures within 6 weeks (20%), of whom 3 were being treated for rUTI.

Initial and 6 week follow up questionnaires are available on 19 of 20 patients. One patient, who continued treatment beyond 6 weeks, had no recorded 6 week responses but had 6 month responses. Of the 16 patients who continued with treatment beyond 6 weeks, 12 have 6 month scores available.

Hence analysis of improvement at 6 weeks is limited to 19 patients which includes 4 treatment failures, whilst 6 monthly KHQ scores and improvement are analysed in 13 patients, none of whom were early treatment failures.

1 patient with PBS had low dose antibiotics added into care due to UTI after catheterisation for instillation, but continued with cystistat.

Average initial KHQ score was 500.8 (534.1 for rUTI group, 450.8 for PBS group)

After 6 treatments average KHQ scores were improved to 426.3. Subgroup analysis showed mean scores of 457.7 for rUTI (improvement significant with $p < 0.05$) and 372.4 for PBS (improved but no significance achieved).

After 6 months, average scores were significantly improved to 278 overall, with 303.2 ($n=6$, $P < 0.05$) for rUTI group, and to 252.8 ($n=6$, $P > 0.05$) for PBS group.

Scores were also analysed by the individual KHQ domain for the whole patient group as shown in table 1.

Again, the Student paired t test was used comparing only patients where the pre and post treatment scores were available.

At 6 weeks only domains for role limitation and physical limitation had statistically significant improvements in scores. However by 6 months only domains for general health and sleep did not show statistically significant improvement. The domains for personal relationships, severity measures and symptom severity showed improvement with statistical significance, $p < 0.05$ while the other 5 domains showed improvement with greater statistical significance, $p < 0.01$.

Table 1

		KHQ Individual Domains									
		General health	Incontinence	Role Limitation	Physical limitation	Social limitation	Personal relationships	Emotions	Sleep / Energy	Severity measures	Symptom severity
		Perception	Impact								
Pre treatment	All patients	42.5	83.5	56.35	57.9	37.7	39	60.8	62.95	40.5	14.75
Data at	pre treatment patient mean	42.1	84.4	57.6	57.5	38.5	35.8	62.3	61.9	42.2	15.2
6 weeks after	post treatment mean	39.5	73.3	38.3	44.4	34.8	29.7	51.1	55.9	40.9	14.1
treatment	difference	2.6	11.1	19.3	13.1	3.7	6.1	11.2	6	1.3	1.1
	p value (paired t test)	0.4899	0.0623	0.0158*	0.0185*	0.5415	0.1886	0.107	0.2749	0.6421	0.0886
Data at	pre treatment patient mean	48.1	82.5	52.2	54.6	32.6	38.3	62.9	63.8	42.7	13.7
6 months after	post treatment mean	36.5	48.5	15.2	27.8	15.3	28.7	27.1	41.8	27.8	9
treatment	difference	11.6	34	37	26.8	17.3	9.6	35.8	22	14.9	4.7
	p value (paired t test)	0.1654	0.0032**	0.0017**	0.0029**	0.0026**	0.0474*	0.0052**	0.1036	0.0139*	0.0105*

All scores are 0-100, except symptom severity 0-30. * significant $P < 0.05$ ** very significant $p < 0.01$

At 6 weeks $n=19$ and at 6 months $n=12$

Interpretation of results

Our study demonstrates improvements in quality of life across most domains of the KHQ following Intravesical Cystistat for both PBS and rUTI. Improvement continues for at least 6 months in responding patients.

Previous statistical analysis (3) has shown “change from baseline of at least 5 points on King's Health Questionnaire domains indicates a change that is meaningful to patients and is indicative of a clinically meaningful improvement in health-related quality of life after treatment”. Hence these improvements in quality of Life are both clinically important to patients as well as statistically significant.

The main limitation of our study is that support provided to the patients from experienced nurse specialists providing their treatment cannot be separated from treatment effect of the instillation and administration by interested and supportive staff, familiar to the patients, maybe a key factor in optimising outcomes. The degree of improvement does vary from patient to patient. Hence management of patients' expectations from the outset of treatment is also likely to be important in determining success.

Concluding message

PBS and rUTI (uncontrolled with prophylactic antibiotics and conservative measures) are often difficult conditions to treat. Patients should be offered a trial of Intravesical Cystistat (hyaluronic acid) as significant improvements in quality of life across most domains of the KHQ are possible and complete treatment failures are infrequent.

References

1. Morales, A; Emerson, L; Nickel, J C; Lundie, M. Intravesical hyaluronic acid in the treatment of refractory interstitial cystitis. J Urol. 156(1):45-8, 1996
2. Torella M; Schettino MT; Salvatore S; Serati M; De Franciscis P; Colacurci N. Intravesical therapy in recurrent cystitis: a multi-center experience. Journal of Infection & Chemotherapy. 19(5):920-5, 2013 Oct.
3. Kelleher CJ1, Pleil AM, Reese PR, Burgess SM, Brodish PH. How much is enough and who says so? BJOG. 2004 Jun;111(6):605-12

Disclosures

Funding: none **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** it was a review of our routine clinical practice **Helsinki:** Yes **Informed Consent:** Yes