

THE CYSTEINYL LEUKOTRIENE D4 RECEPTOR ANTAGONIST MONTELUKAST FOR THE TREATMENT OF INTERSTITIAL CYSTITIS. A 12-MONTH FOLLOW-UP STUDY.

Aims of Study

The presence of leukotriene D4 receptors in human detrusor muscle cells [1] and increased leukotriene E4 in urine from patients with Interstitial Cystitis [2] support the hypothesis of a pathogenic role of cysteinyl containing leukotrienes in Interstitial Cystitis. We have recently shown in a 3 month prospective, open, nonrandomized study that Montelukast resulted in significant improvement in urinary frequency and pain [3]. The aim of this study was in a 12 month follow-up study to evaluate the effect of Montelukast on urinary frequency and pain in patients with Interstitial Cystitis.

Methods

Ten women with Interstitial Cystitis according to NIDDK criteria and detrusor mastocytosis were included in the original study. The patients were treated with 10 mg Montelukast daily for three months. All patients choosed to continue the treatment after the study. At 6 and 12 months the patients from the original study filled out the same voiding diary as in the original study. The efficacy of treatment was determined by 24-hour urinary frequency, nocturia and pain using visual analog scales.

Results

All ten patients continued the treatment with 10 mg Montelukast during the 12 month follow-up period. No side effect were observed. In the original study there was a statistically significant decrease in 24-hour urinary frequency, nocturia and pain. After 1 month there was no further significant change in these parameters. The results of the follow-up study are shown in the table below.

	<u>Mean before</u>	<u>Mean month after</u>			<u>Mean month follow-up</u>	
		1	2	3	6	12
24-Hr. voiding	17.4	12.4	12.6	12.0	12.3	11.8
Nocturia	4.5	3.0	2.9	2.8	2.7	2.8
Pain scale	46.8	23.8	23.4	19.6	23.3	22.6

Pain scale: 0 = none, 100 = worst

Conclusions

The results of the follow-up study further support a role for leukotriene antagonists for treating patients with Interstitial Cystitis but further placebo controlled trials are needed and are currently under way.

Reference List

1. The action of cysteinyl-leukotrienes on intracellular calcium mobilization in human detrusor myocytes. BJU.Int. 2001;87:690-96.
2. Increased urinary leukotriene E4 and eosinophil protein X excretion in patients with interstitial cystitis. J.Urol. 2001;166:2121-25.
3. The cysteinyl leukotriene D4 receptor antagonist montelukast for the treatment of interstitial cystitis. J.Urol. 2001;166:1734-37.

