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MANAGEMENT OF WOMEN WITH CHRONIC CYSTITIS: AN AUDIT OF OUTCOME

Hypothesis / aims of study

Chronic cystitis is characterised by bladder pain, urinary frequency, urgency and nocturia. Its aetiology remains poorly understood. One of the proposed mechanisms includes a multi-factorial aetiology involving an initial injury to the bladder epithelium, which fails to heal due to a local biochemical abnormality resulting in increased permeability to cytotoxic factors in the urine as well as to chronic neurogenic up-regulation and chronic inflammation.(1) Due to the poor understanding of the underlying mechanisms, there is no universally effective treatment and a variety of treatment modalities have been investigated, with varying success over the years. Often, clinicians resort to a trial and error approach.

In our unit, the first line of management following a diagnosis of chronic cystitis involves a six week course of serial antibiotics. We undertook this audit to evaluate the response of this treatment using the King's Health Questionnaire and Patient Perception of Bladder Condition.

Study design, materials and methods

Women attending the department, complete the King's Health Questionnaire (KHQ) and Patient Perception of Bladder condition (PPBC) questionnaires pre-operatively. Main indications for the procedure included bladder pain during filling in the absence of urinary tract infection, reduced bladder capacity, poor bladder compliance, sensory urgency during cystometry or failure to respond to anti-cholinergics. Intra-operatively, a local standardised data collection sheet is used to document findings of squamous metaplasia, trigonitis, urothelial erythema, trabeculations, haemorrhages, refill haemorrhages and the extent of involvement in the four quadrants. In the presence of these findings and histological diagnosis of chronic cystitis, women were prescribed a six week course of serial antibiotics (three antibiotics for 2 weeks each). Antibiotics commonly used were cephalexin, ciprofloxacillin, doxycycline, augmentin or trimethoprim based on patient allergies. Women were then requested to complete the questionnaires at least 6-8 weeks after commencing the course of antibiotics.

Results

Forty women had completed the questionnaires pre and post operatively. Age of presentation varied from 26 to 91 years (mean 54.8). Sixty five percent of women were parous (range 1-7), five women were nulliparous and parity was not documented for 9 women. Fifty percent of women were post menopausal. Only three women were taking hormone replacement therapy, of these one had premature ovarian failure. In fifty six percent of women, the main presenting complaint was urinary frequency/nocturia/ urgency/ bladder pain and 98% of women had more than one complaint.

As regards, mid-steam urine (MSU) analysis, this was requested for 19 women at initial presentation. Urinary white blood cell count was below 50 in 16 patients and three women had between 100-200 cells. Culture results were reported as no growth (12), E.Coli > 10^5 (4), Proteus > 10^5 (1), mixed growth > 10^5 (1) and enterococcus 10^{4-5} (1).

In seven women, clear indication for cystoscopy was not documented and in nine, cystoscopy was done during investigation/management for urinary urge/stress incontinence. On examination, 53% were noted to have anterior vaginal wall prolapse graded as mild (11 patients), moderate (five patients) and severe (1).

Intra-operative notes were available for 34 patients. Forty seven percent had erythema and haemorrhages in the trigone and 75% had severe urothelial erythema (66% of these in all 4 quadrants). Fifty five percent of women had moderate to severe punctuate haemorrhages. Severe trabeculations was seen in 73% of women, of these 75% involved all four quadrants. Twenty four out of 34 women had refill haemorrhages and 47% of these occurred in all four quadrants.

Histology confirmed chronic cystitis in all patients and was graded as mild (28.8%), moderate (18.4%), severe (42.2%) and follicular cystitis (10.5%).

All patients received six week course of serial antibiotics and three received a second six week course, prior to completing the follow-up questionnaire.

Table 1: Percentage of women with minimum of 5 points improvement with King's Health questionnaire post operatively.

King's Quality of life Questionnaire	**Percentage with improvement by 5 points**
General Health Perceptions	7.5%
Incontinence Impact	40%
Role limitations	33%
Physical limitations	35%
Social limitations	45%
Personal relationships	15%
Emotions	45%

Sleep/ Energy	42.5%
Severity measures	50%

Table 2: Difference in Score of symptoms assessment as per King's Health questionnaire pre and post operatively.

Symptoms	**Decrease by one point**
Frequency	27.5%
Nocturia	25%
Urgency	22.5%
Urge Incontinence	27.5%
Urinary Stress Incontinence	13%
Nocturnal enuresis	10%
Coital Incontinence	7.5%
Infection	10%
Bladder pain	12.5%

Twenty eight percent of women had an improvement of one point on their PPBC score.

Interpretation of results

Chronic cystitis is diagnosed in a wide range of patients suffering from lower urinary tract dysfunction. There is a response to treatment with sequential antibiotic therapy. This audit shows that six-week serial antibiotics for chronic cystitis results in moderate improvement in quality of life and PPBC score with minimal improvement in nocturia and bladder pain.

Concluding message

There is an urgent need to identify the basis for clinical improvement noted with serial antibiotics in chronic cystitis and to determine the underlying pathology leading to these symptoms.

Specify source of funding or grant	**No Funding/ Grants to declare.**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require ethics committee approval because	**This was an audit of outcome of normal clinical care and didnot require ethics approval.**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**