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PUTTING THE COSTS AND BENEFITS OF INTRAVESICAL CYSTISTAT INTO PERSPECTIVE – COMPARISON TO PUBLISHED DATA FOR INTRAVESICAL BOTOX TREATMENT

Hypothesis / aims of study

Intravesical Cystistat is increasingly being used for a variety of types of chronic cystitis including painful bladder syndrome, recurrent UTIs, chemical cystitis and radiation cystitis.

The evidence for its efficacy is low quality, as it has not been submitted to many quality randomised controlled trials. Additionally reports often group together patients being treated for a variety of different conditions. Prohibitive treatment cost is often quoted as a reason not to utilise Cystistat more commonly in clinical practise.

We have recently reported quality of life outcomes for a course of Intravesical Cystistat 40mg instillations as treatment for either painful bladder syndrome or recurrent urinary tract infections (1). Hence we have now compared the quality of life improvements and direct costs associated with the treatment against another established treatment for troublesome symptoms from benign bladder pathology – intravesical botox in treating idiopathic detrusor overactivity.

Study design, materials and methods

We considered suitable treatments available against which to compare Cystistat. The criteria were that it should be a non-operative treatment aiming for management of troublesome urinary symptoms. It should also be an established and approved treatment within the United Kingdom's National Health Service and have available published quality of life data which we could use for comparison.

Whilst continence surgery has costs that can be calculated and published quality of life improvements, the long term response makes it an unsuitable comparator.

Intravesical botox for idiopathic detrusor overactivity was chosen because it has reported QOL improvements, costs that can be calculated for treatment within our own department from our own data, and a known median duration of response, which is 8 months in the report (2) used as a comparator against our own experience with intravesical Cystistat in this study.
The costs associated with a single treatment of Intravesical botox within our department were calculated and compared against a treatment course of Cystistat instillations as reported by us elsewhere (1). The costs to the patient were not considered nor were the economic benefits of the treatment successes. The costs did however include the cost of catheters for the 24% of patients requiring to self catheterise (for a median of 3 months using 4 catheters per day) in our own practise with intravesical botox for idiopathic detrusor overactivity..
The costs of our treatment regime with Intravesical Cystistat were also calculated. We administer the treatment on a weekly basis for 6 weeks, then aim to reduce the frequency – usually giving two instillations at 2 or 3 weekly intervals before moving onto 4 weekly treatments. This regime is modified according to response for individual patients but the average number of instillations given over first 8 months is 14. An 8 month treatment schedule was chosen to compare against the median duration of response for the botox.

In terms of specialists' time, our nurses allocate 15 minutes for Cystistat administration whilst consultant allocates 30 minutes per patient for botx and is assisted by an specialist nurse during the procedure.
We have reported elsewhere (1) the QOL improvements using Kings Health Questionnaire (KHQ) for patients after 6 months of treatment, when we feel improvement is at the optimum. We have compared this against reported 12 week improvement in KHQ scores for 200units Intravesical botox treating idiopathic detrusor overactivity (2). We note that 12 weeks is probably the optimum time to measure maximum improvement after botox which corresponds with our maximum improvement at 6 months with Cystistat..

We accept that other departments may use different types of equipment or gain different levels of discount from suppliers for equipment and / or treatments used in this comparison, and hence the comparison may not apply equally in all departments. In particular our pharmacy has negotiated an advantageous price for Cystistat given our relatively high utilisation

Results

Mean improvement in KHQ scores with Botox 200u according to literature (2) – 247 points at 12 weeks. Mean improvement in KHQ after 6 months with a course of Intravesical Cystistat (1) is 213 points. There was statistically improvement in 7 /10 domains for botox and 8 /10 domains for Cystistat.
This equates to £3.92 and £3.66 per point of improvement on KHQ respectively for Intravesical botox and Intravesical Cystistat.

Botox	Cost (£)		Cystistat	Cost(£)
Scope processing	562		Cystistat (single vial)	49
Consultant 30 minutes	19.79		bladder syringe	0.33
Specialist nurse 30 minutes	9.2		catheter	1.1
Single use injection sheath & needle	37		basic dressing pack	0.46
Basic dressing pack	0.46		Gloves (1 pair)	0.2
Instillagel	1.38		Specialist nurse (15mins)	4.6
Giving set	0.49			
Litre saline	0.68			
Botox - 2 x 100 u vials	239.9			
2 pairs sterile gloves	0.4			
ciproxin (3 day supply)	0.2			
10ml syringes & needles (3)	0.6			
ISC -24% of patients x 4 /day for 90 days	95.04			
			Total	55.69
Total	967.14		course of 14 treatments	779.66

Interpretation of results

This study is a very simplified comparison of the benefits and costs of two different treatments used for separate benign bladder conditions. It only takes into account the providers costs and not the patients' costs and it only takes into account the quality of life benefits measured on KHQ, not the economic benefits for them or the wider population (improved ability to work / function etc). When allowance is made for the degree of improvement costs are very similar with Cystistat slightly cheaper per unit improvement on KHQ.

Concluding message

Treatment with Intravesical botox for idiopathic detrusor overactivity and treatment with an 8 month course of Intravesical Cystistat for bladder pain or recurrent UTIs produce similar improvements in quality of life on the kings Health Questionnaire for similar costs to the health care provider using costs attributable within our department. Intravesical botox is a commonly used and approved treatment in the UK National Health service. Cost should not be a reason to deny suitable patients the option of treatment with Intravesical Cystistat.

References

1. ICS Meeting 2015 Abstract submission 17173. Improvements in Patients' quality of life following treatment with Intravesical Hyaluronic acid (Cystistat 40mg) for painful bladder syndrome and recurrent UTIs
2. Sahai A, Dowson C, Khan M, Dasgupta P. Improvements in quality of life after botuminum toxin-A injections for idiopathic detrusor overactivity:resulsts from a randomized double-blind placebo-controlled trial. BJUI 2009, 103, 1509-1515

Disclosures

Funding: None **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** It is a cost comparison study comparing our routine practise against data from literature **Helsinki:** Yes **Informed Consent:** Yes