

**434**

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## **CLINICAL OUTCOME IN MALE PATIENTS WITH DETRUSOR HYPERACTIVITY WITH IMPAIRED CONTRACTILITY (DHIC)**

### Hypothesis / aims of study

Detrusor hyperactivity with impaired contractility (DHIC) is increasingly recognised in the elderly. A hypocontractile detrusor limits the use of anticholinergics whilst options aiming to facilitate voiding can potentially exacerbate incontinence. We aimed to review the clinical outcome of patients with urodynamic DHIC.

### Study design, materials and methods

Urodynamic reports from 2005 to 2009 were reviewed. Detrusor hyperactivity was defined as either phasic detrusor contraction and/or reduced compliance on filling. Hypocontractility was characterised by detrusor contraction of reduced strength and/or duration, resulting in prolonged bladder emptying. Patients with acontractile and neuropathic bladders were excluded. 54 male patients (age 51-101, mean 76) had findings consistent with DHIC. Two outcome measures were looked into when examining clinical records: 1) patients' subjective symptom outcome and 2) complications related to the treatment prescribed.

### Results

Of the 54 males, 8 presented with voiding symptoms, 17 had storage and 31 had mixed symptoms. 22 had previous operations for bladder outlet obstruction. On urodynamic filling, 26 had reduced compliance, 18 had phasic detrusor contractions and 10 demonstrated both features of detrusor hyperactivity. The mean cystometric capacity was 366 ml. During voiding, 17 patients showed signs of abdominal straining. The mean Qmax was 8 ml/s and the mean post-void residual was 102 ml.

The median follow-up period was 11 months. 4 patients received no intervention. 2 patients were taught intermittent self-catherisation. 5 patients underwent surgery to reduce outlet resistance. 43 patients were started on pharmacotherapy. The results are demonstrated in this table:

	Total	Better	Same	Worse	No follow-up
Surgery	5	5	0	0	0
Anticholinergics	16	9	5	0	2
Alpha-blockers	16	6	5	2	3
Alpha-blockers & anticholinergics	5	4	0	0	1
Alpha-blockers & bethanechol	3	3	0	0	0
Bethanechol	4	1	1	0	2
	48	27 (56%)	11 (23%)	2 (4%)	8 (17%)

The coexistence of both features of detrusor hyperactivity (i.e. reduced compliance and phasic contraction) was not associated with the lack of symptomatic improvement (i.e. same and worse,  $p > 0.05$ ). Similarly, the presence of abdominal straining did not correlate with symptomatic outcome ( $p > 0.05$ ).

In terms of complications, 1 patient developed acute urinary retention (18 months after commencing alpha-blocker). There were 3 cases of uncomplicated urinary tract infections. No patient had urosepsis.

### Interpretation of results

This is a retrospective analysis on a condition that has been traditionally considered difficult to manage. There is currently very little data on its clinical course and management. However it is thought that therapeutic options targeting one component of the condition may potentially exacerbate the other. Our approach to DHIC is mainly guided by symptoms. Most of the patients were commenced on pharmacotherapy as a significant proportion already had prior surgery for outlet obstruction and the majority of them were elderly.

Our study is limited by its retrospective design and the subjective nature of the patients' self-reported symptom outcome. Nevertheless we are able to demonstrate that conventional pharmacotherapy is a reasonably effective alternative to surgery. In addition, even in the presence of impaired contractility, the risk of developing acute urinary retention and sepsis is low with cautious low-dose anticholinergics.

### Concluding message

Anticholinergics and alpha-blockers appear to be safe in patients with DHIC. The majority of patients report symptomatic benefit from either drug or surgical treatment.

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<b>Is this a clinical trial?</b>	<b>No</b>
<b>What were the subjects in the study?</b>	<b>HUMAN</b>

<i>Was this study approved by an ethics committee?</i>	No
<i>This study did not require ethics committee approval because</i>	A retrospective study based on clinical records.
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	No