LONG TERM OUTCOMES OF CONTINENT CATHETERISABLE CHANNELS AND THEIR RESERVOIRS – ARE NATIVE BLADDERS BETTER?

O'Connor EM[1], Barratt R[1], Malde S[2], Raja L[1], Foley CL[3], Taylor CJ[2], Wood DN[1], Hamid R[1], Ockrim JL[1], Greenwell TJ[1]

[1] Department of Urology, University College Hospital at Westmoreland Street, 16-18 Westmoreland St, London W1G 8PH, UK

[2] Department of Urology, Guy's and St Thomas's Hospital Trust, London, UK

[3] Department of Urology, Lister Hospital, Stevenage, UK

INTRODUCTION

Indications for creation of a continent catheterisable channel using the Mitrofanoff principle in adults are varied and long term data in this challenging patient cohort are lacking.

The effect of urinary reservoir type on Mitrofanoff outcomes has not been evaluated in adults. We have assessed the effect of type of urinary reservoir on channel usage and requirement for revision.

METHODS

We performed a retrospective review of consecutive patients over the age of eighteen having creation of a continent catheterisable channel using the Mitrofanoff principle at our institution between 1985-2013.

We evaluated outcomes in terms of continued use, continence and need for revision surgery for continence (UI) or catheterisation (ISC) issues. We correlated these outcomes with urinary reservoir type.

Statistical analysis was by Chi Squared analysis and Students T-Test.

This was a single centre multi surgeon series, with nine consultant surgeons with a sub-specialist interest in reconstructive urology undertaking Mitrofanoff channel formation during this study period (sequentially and in parallel)

METHODS

Demographic information was collected, including: age at surgery, gender and length of follow up. Data regarding concomitant or prior surgical procedures such augmentation cystoplasty or neobladder formation were recorded.

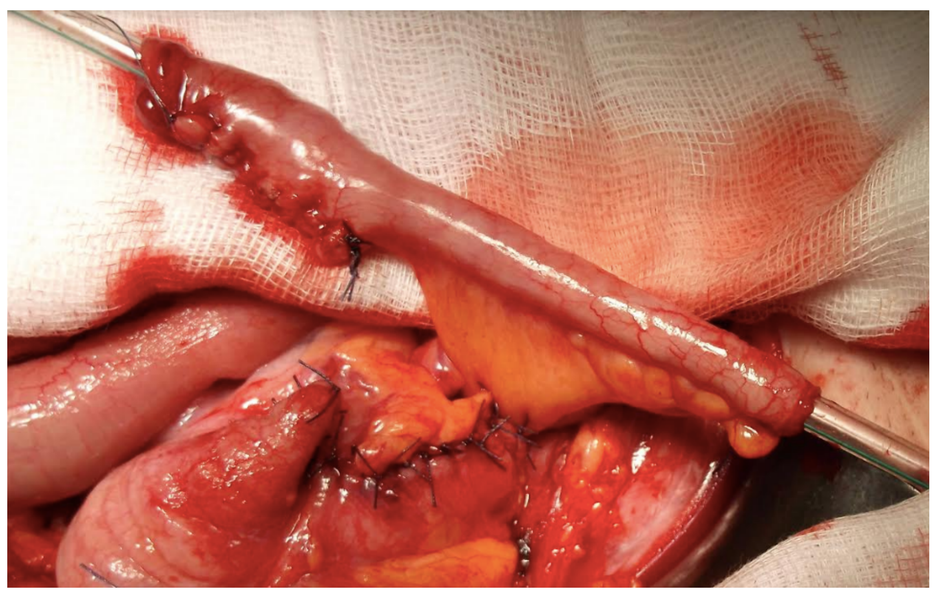

FIGURE 1: MITROFANOFF CHANNEL CONSTRUCTED FROM APPENDIX AND APPROXIMATED PORTION OF CAECUM

RESULTS

The 176 patients had a median of 60 months (range 2-365) follow-up available. Outcomes at last follow-up are listed in Table 1.

In total, 22% (n=39) of patients had their continent catheterisable channel created in a native bladder with 39% (n=69) having construction of their channel in a neobladder and another 39% (n=69) into a prior or concomitantly constructed augmentation cystoplasty.

The majority of patients with neobladders (n=59, 85%) had channels which were in use at last follow up, with slightly lower numbers utilising their channels in those with native bladders (n=25, 64%) and bladders with a prior clam cystoplasty (n=50, 73%).

	Native Bladder	Neobladder	Clam Cystoplasty
N (%)	39 (22%)	69 (39%)	68 (39%)
Mean Age (Range) Years	36 (17-61)	46 (18-71)*	39 (18-73)
Mean FU (Range) Months	70.6 (6-293)	85.9 (2-365)	77 (2-339)
In Use at Last FU (%)	25* (64%)	59 (85%)	50 (73%)
Dry at Last FU (%)	25 (64%)	52 (75%)	45 (66%)
Channel Bulking for UI (%)	7 (18%)	7 (10%)*	18 (26%)
Open Channel Revision for UI (%)	14 (36%)	22 (32%)*	36 (53%)
Revision for ISC (%)	14 (36%)	20 (29%)	17 (25%)

- *P < 0.05

CONCLUSIONS

Mitrofanoff channel formation into a neobladder is associated with:

- A significantly lower need for endoscopic or open revision for urinary incontinence than when formed into a clam cystoplasty and
- A significantly higher rate of continued usage than when formed into a native bladder.

This data may be helpful in counselling patients who are undergoing concomitant surgical procedures at the time of their continent catheterisable channel formation.