

## **OUTCOME OF PELVICOL™ CYSTOPLASTY FOR REFRACTORY DETRUSOR OVERACTIVITY USING PATIENT QUESTIONNAIRE ANALYSIS**

### **Aims of Study**

The majority of patients with detrusor overactivity are usually treated successfully by anticholinergic therapy and/or physiotherapy. However approximately 10% are refractory to conservative therapy and these patients are usually treated by a "Clam" enterocystoplasty primarily using terminal ileum. However this operation carries a considerable morbidity including recurrent urinary tract infections and approximately 25% of women have voiding difficulties requiring intermittent self-catheterisation. Excessive mucus production may hinder voiding and predispose to bladder stones. There are also concerns regarding acid-base balance, growth in juveniles and bile acid metabolism, which can result in profuse diarrhoea. A major concern also is of malignant transformation at the vesico-ileal anastomosis. Pelvicol™ is a flat sheet of acellular porcine dermal collagen that has been used extensively and safely for reconstruction throughout the human body. This study was therefore carried out to assess the effect of replacing the ileal segment with Pelvicol™ in a cystoplasty procedure

### **Methods**

Nine women with urodynamically proven detrusor overactivity who had not responded to conservative treatment were recruited into the study. A King's quality of life questionnaire (QoL) was carried out pre-operatively. The retropubic space was entered via a Pfannenstiel incision and the bladder mobilised. The dome of the bladder was incised and the incision then extended coronally to within 3cm of the ureteric orifices on each side. A 12x8cm piece of Pelvicol™ was then sutured into the bladder using dissolvable sutures and covered with extra-vesical adipose tissue or omentum. An indwelling foley catheter was inserted and the bladder allowed to drain for 4 weeks. A cystogram was carried out and the catheter removed if no leaks were observed. The patients were subjectively reviewed at 6 weeks and 6 months and a repeat QoL questionnaire was completed at the latter visit. A follow up cystoscopy was carried out in 2 women

### **Results**

The average length of stay was 6 days. No leaks were apparent in any case at cystogram. One patient was lost to follow up but prior to moving out of the area had been the subject of a local press article describing a dramatic improvement in her QoL. At 6 months, 6 women had an overall lower King's QoL score and 2 were unchanged. Four women were cured, 2 were improved and 2 were unchanged and classified as operative failures according to their incontinence impact score. Two women suffered from recurrent urinary tract infections requiring continuous rotational antibiotics. No woman is required to self-catheterise for high residual urinary volumes: one woman was taught to self catheterise to help reduce the frequency of urinary tract infection, which was not effective. One woman had a wound infection but no other adverse side effects were apparent. Follow up cystoscopy revealed that the Pelvicol graft was completely integrated into the host tissue and the surface covered with apparently normal urothelium in both cases.

### **Conclusions**

A cystoplasty procedure using Pelvicol™ would appear to improve symptoms of refractory detrusor overactivity and incontinence without the inherent side effects of using intestinal segments.