

AUGMENTATION ENTEROCYSTOPLASTY FOR END-STAGE BLADDER DISEASE DUE TO KETAMINE ABUSE

Hypothesis / aims of study

Chronic ketamine cystitis (KC) related end-stage bladder dysfunction (ESBD) is associated with severely bladder pain, urgency and frequency, and upper urinary tract deterioration which have profound impact on quality of life (QoL). Traditional treatment for interstitial cystitis such as intravesical hyaluronic acid instillation or cystoscopic hydrodistention are usually ineffective for KC. The study was aimed to evaluate the efficacy of augmentation enterocystoplasty (AE) in treating the bladder pain and improving bladder dysfunction in KC related ESBD.

Study design, materials and methods

We performed AE for 10 patients with chronic KC related ESBD, which is based on the criteria including refractory bladder pain, urgency and frequency or upper urinary tract damage such as bilateral hydronephrosis and contracted bladder. Every patient had been treated conservatively with medication or hydrodistention for at least one year before they were elected to surgical intervention. Video-urodynamic studies were obtained before AE and three months after surgery. Outcome measurements included visual analogue score (VAS) for pain, cystometric bladder capacity (CBC), peak urinary flow rate (Qmax), post-void residual (PVR) and maximal detrusor pressure (Pdet). The patients' general satisfaction to treatment outcome was also assessed by the patient perception of bladder condition (PPBC).

Results

A total of 3 men and 8 women underwent this procedure as indicated. The mean age was 26.5 (range 20-38) years old and the duration of ketamine abuse was 3.82 years (range 2-7). Contracted bladder was noted in all patients, hydronephrosis in 8 and vesicoureteral reflux in 7. At 3 months after AE, VAS was remarkably improved from baseline to the end-point (8.36 ± 1.5 vs 2.18 ± 1.47 , $p < 0.0001$), CBC increased from 52.6 ± 16.5 to 312.2 ± 61.8 ml ($p < 0.0001$), Qmax increased from 7.1 ± 3.64 to 15.9 ± 6.01 ml/s ($p < 0.0001$) and Pdet reduced from 28.4 ± 16.5 to 16.1 ± 8.19 cmH₂O ($p = 0.019$). All patients reported improvement in QoL and the PPBC was markedly improved from 6 to 1.55 ± 0.82 . All hydronephrosis and vesicoureteral reflux disappeared after AE with or without ureteral reimplantation.

Interpretation of results

The results suggested that AE is effective for early pain relief and improvement of objective bladder condition as well as the subjective PPBC in patients with KC-related bladder dysfunction.

Concluding message

This study was the pilot study of AE on KC-related ESBD to demonstrate the efficacy. Patients with KC are young and the ESBD usually makes them unable to work normally. Early surgical intervention can improve clinical symptoms and prevent deterioration of the upper urinary tract in these patients.

Disclosures

Funding: None **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Buddhist Tzu Chi General Hospital Research Ethics Committee **Helsinki:** Yes **Informed Consent:** Yes