

PRESERVATION OF BLADDER FUNCTION BY CATHETER CLAMPING IN LONG-TERM SUPRA-PUBIC CATHETERS – A VALID STRATEGY? (TO CLAMP OR NOT TO CLAMP?)

Hypothesis / aims of study

Supra-pubic catheterisation (SPC) is an acceptable and well tolerated method of bladder management in selected Spinal Cord Injured (SCI) patients with neuropathic bladder dysfunction. There is still no consensus on whether clamping SPCs regularly is of any benefit to SCI patients. The changes in bladder function were analysed in patients who clamped their SPC regularly with those who did not by Video-cystometry (VCMG) and renal tract ultrasound.

Study design, materials and methods

A retrospective analysis was conducted of 100 consecutive SCI patients with a SPC inserted between 1995 – 2005 at our institution. VCMG was performed before and after SPC insertion in all patients. Parameters analysed were, Maximum Detrusor Pressure (MDP), Maximum Bladder Capacity (MCC) and Loss of Compliance (LOC). Renal Ultrasound (USS) assessed for evidence of upper tract deterioration. The cohort was divided into two groups; those patients that clamped with anticholinergic or Botox therapy and those patients who never clamped.

Results Interpretation of results

The mean age was 45.5 years (range 16 -75). Male to female ratio was 3:1, levels of SCI injury were as follows: cervical: 39; thoracic: 44; lumbar: 15; cerebrovascular accident CVA: 2. The mean of follow-up with SPC was 9 years (range 5- 15years). 70/100 patients were clamping their SPCs. There was a slight reduction in MDP in both groups after SPC insertion, from 39.5 to 36 cm.H2O in favour of clamping and from 33 to 28 cm.H2O for group without clamping and this was deemed statistically insignificant $p = 0.06$ & $p = 0.35$ respectively.

The reduction in MCC for the clamping group was statistically insignificant from 375 to 322 mls ($p = 0.08$) whereas, the reduction in MCC without clamping decreased from 330 to 150 mls and this was statistically significant ($p < 0.005$).

LOC was noted in 29/70 (41%) in the clamping group compared to LOC 19/30 (63%) in the non-clamping group.

Bladder morphology showed smooth bladder in 17 patients with clamping and 5 patients from the non clamping group. There were four patients with upper renal tract dilatation on USS, 2 patients in each group.

Concluding message

Our data suggests that clamping SPC regularly with anticholinergic medication in neurogenic bladder dysfunction can preserve bladder capacity and significantly preserve bladder compliance. This ensures that the options remain flexible for future adjustments if the patient decide later on to move to a different method of bladder management.

<i>Specify source of funding or grant</i>	None
<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	No
<i>This study did not require ethics committee approval because</i>	Not needed
<i>Was the Declaration of Helsinki followed?</i>	No
<i>This study did not follow the Declaration of Helsinki in the sense that</i>	Not needed
<i>Was informed consent obtained from the patients?</i>	Yes