

A STUDY OF EFFECT OF LUMBAR EPIDURAL ADMINISTRATION OF NEOSTIGMINE ON LOWER URINARY TRACT FUNCTION.

Hypothesis / aims of study

Neostigmine is cholinomimetic and is in use for postoperative analgesia. Voiding difficulty (retention) has rarely been reported following use of this drug (1). However, its urodynamics effects on voiding function have not been elucidated.

Study design, materials and methods

Twelve adults (6 women, 6 men) without significant voiding symptoms planned for rigid cystoscopy under local anesthesia were enrolled. They underwent multichannel urodynamic studies (UDS) consisting of filling cystometry and pressure flow study, before and 25min. after lumbar epidural administration of 2µg/kg Neostigmine. All patients received Ondansetron 8mg intravenously immediately prior to administration of neostigmine.

Results

Indications for cystoscopy were check examination for carcinoma urinary bladder (3), carcinoma cervix (5) and removal of ureteral stent (4). Mean age of the patients was 53.20±11.49 years and symptom-score 0.6 (range 0-3). There was a trend of decreased maximum cystometric capacity after administration of neostigmine (404.72±145.9ml vs. 356.0±152.7ml; p=0.12) without any change in end-filling pressure. Six patients developed de novo terminal overactivity (p=0.031). There was no difference in any of the voiding parameters. Mean pain score (0-10) during cystoscopy was 1.27 (range 0-3). The drug was well tolerated in majority of the patients. None experienced hemodynamic instability or emesis requiring additional dose of anti-emetic medication.

Interpretation of results

Epidural neostigmine is effective in providing analgesia during diagnostic rigid cystoscopy. It tends to decrease bladder capacity and leads to de novo overactivity without any effect on voiding function.

Concluding message

These results would help clinician counsel patients regarding voiding pattern after neostigmine analgesia. It would also potentially favour use of neostigmine for postoperative analgesia in cases where postoperative voiding dysfunction is a concern.

References

1. Anesthesiology 1995; 82: 331-343.

<i>Specify source of funding or grant</i>	none
<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	institute ethics committee, postgraduate institute of medical education and research, chandigarh, india
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes