

## AUTONOMIC DYSREFLEXIA DURING URODYNAMIC STUDIES

### Hypothesis / aims of study

Autonomic dysreflexia (AD) is an acute syndrome characterised by inappropriate and massive autonomic response that occurs in patients with spinal cord injury above the T6 level. Aim of the study to evaluate the incidence of AD during cystometry

### Study design, materials and methods

163 spinal cord injury patients were studied by neurological and urological examination and urodynamic evaluation with concurrent recording of blood pressure, heart rate and symptoms and signs of AD. Patients were considered to have AD if blood pressure reached values higher than 160/100 mmHg.

### Results

All the patients showed a significant increase of both systolic and diastolic blood pressure, although only 17 showed pressure values higher than 160/100 mmHg (in eleven of them without AD symptoms). AD was more frequent in cervical patients ( $P = 0.034$ ), but did not correlate with any other clinical features: sex ratio, age, disease duration, completeness of lesion, incidence of detrusor hyperreflexia/areflexia and detrusor-sphincter dyssynergia, voiding modalities, usage of anticholinergic drugs. In four patients blood pressure increase began when uninhibited contraction started, in 2 it was coincident with uninhibited contraction peak and in the other eleven it appeared at maximum bladder capacity.

### Interpretation of results

During urodynamic evaluation all the patients with lesion level above T6 showed signs of sympathetic stimulation, although only some showed dangerous blood pressure values; the relationship between urodynamic data and dysreflexia crisis shows that both the presence of detrusor uninhibited contractions and bladder distension are able to stimulate the crisis treatment with anticholinergic drugs is not sufficient to prevent autonomic dysreflexia starting from the bladder,

### Concluding message

These patients are at risk of developing autonomic dysreflexia following maximum bladder capacity.

### Disclosures

**Funding:** no **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** gulhane deneyssel arastirmalar merkezi **Helsinki:** Yes **Informed Consent:** Yes