

Analysis of Detrusor Activity According to Type of Cerebrovascular Accidents

Introduction and Objective: Cerebrovascular accident (CVA) is a common and serious neurologic event in the elderly. It can affect bladder function in many ways and may lead to detrusor overactivity (DO), underactivity (DU)/areflexia (DA), or DO and DU simultaneously. The aim of the present study was to evaluate differences in a detrusor activity according to type of CVA.

Materials and Methods: We reviewed the medical records of 211 patients who received urodynamic study (UDS) due to lower urinary tract symptoms following CVA from May 2003 to June 2010. Of the patients, excluding patients with other neurologic disorder, history of urinary tract operation, oral medication that may affect detrusor activity, less than 1 month from CVA to UDS, prostate volume larger than 40g in men, or bladder outlet obstruction, 76 patients were included into the final analysis.

Results: Mean age was 71.8 years and mean time from CVA to UDS was 631 days. The type of CVA was ischemic in 44 (57.9%) patients and hemorrhagic in 32 (42.1%) patients. When stratified by the type of CVA (ischemic: group I vs. hemorrhagic: group II), there were no significant differences in the incidences of DO (50 vs. 25%), DU/DA (27.3 vs. 43.8%), and DO+DU (22.7 vs. 31.2%) between the two groups ($P=0.086$). When the detrusor activity was simplified by the presence of DO, the incidence of DO in group I was higher than that in group II, however there was no significant difference (72.7% vs. 56.3%, $P=0.135$). On the other hand, when the detrusor activity was simplified by the presence of DU/DA, the incidence of DU/DA was significantly higher in group II than group I (50.0% vs 75.0%, $P=0.028$). The UDS parameters other than detrusor activity were not different between the two groups (all $P > 0.05$).

Conclusions: In our patients with CVA and subsequent lower urinary tract symptoms, the incidence of DU/DA was significantly higher in hemorrhagic type than ischemic type, whereas there was no significant difference in the incidence of DO between the two groups. About 30% of patients had DO and DU simultaneously.