

Relationship Between Overactive Bladder Symptom Severity and Cystometric Bladder Capacity in Patients with Overactive Bladder

Severity of overactive bladder (OAB) symptoms is thought to be related to bladder capacity (i.e. the lower the capacity, the greater the intensity of symptoms). The aim of this study is to evaluate the assumptions that patients with OAB have low cystometric bladder capacity (CMBC) and there is an inverse relationship between symptom severity of OAB and CMBC. Patients completed the Overactive Bladder Symptom Score questionnaire (OABSS) and underwent evaluation via a focused exam, 24-hr bladder diary, urinalysis and culture, cystoscopy, VUDS, uroflow, etc. CMBC was defined as volume at which patient felt uncomfortably full or experienced a severe or involuntary urge to void. Patients were assigned to the OAB group (OAB symptoms based on graded urgency responses) and or the LUTS only group (LUTS without OAB symptoms). The relationship between OABSS and CMBC was interpreted as follows: very strong ≥ 0.7 , moderate ≥ 0.5 , fair ≥ 0.2 , and otherwise negligible. 110 patients (mean age = 67 yrs) were included in the study. The OAB group has 66 patients, and LUTS only had 44. CMBC ranged from 90 to 3084 mL. The mean CMBC of the OAB group was smaller than the LUTS only group, (435.6mL vs. 563.8 mL, $t = 2.0$, $p = 0.050$). Patients with OAB had larger mean OABSS than LUTS only (15.1 vs. 7.0, $t = 11.2$, $p < 0.001$). There was an inverse correlation between CMBC and OABSS, greater in OAB patients ($r = -0.34$) than those with LUTS only ($r = -0.022$). Half of the OAB group had capacities above 400 mL, compared to two-thirds of the LUTS only group. 6% of OAB patients had extreme capacities (≤ 150 mL and ≥ 1000 mL). Patients with OAB have slightly lower bladder capacities compared to those with LUTS only. Symptom severity of OAB patients increases as capacity decreases. Special attention must be placed on the extremes (e.g., patients with high OABSS and CMBC) as therapeutic choices for treatment may differ. There are a variety of etiologies and the presentation tends to be multifactorial.