Does Bladder Capacity After Hydrodistension Reflect Symptom Severity in Non-Hunner Lesion Bladder Pain Syndrome?

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To investigate the relationship between bladder capacity measured during hydrodistension and symptom scores in patients diagnosed with BPS.

40 adult patients undergoing diagnostic cystoscopy and hydrodistension for suspected BPS between January–December 2024 were retrospectively evaluated.

Hydrodistension was performed at 80 cm H_2O for 5 minutes, followed by measurement of bladder capacity and assessment of endoscopic findings.

Bladder capacity was correlated with demographic characteristics, uroflowmetry parameters, and symptom scores (ICSI, ICPI, OAB-V8, and VAS), with additional subgroup analyses.

Table. Glomerulation Analysis

	Present (n=15)	Absent (n=46)	P value
Age (years)	59.76 ± 13.09	46.73 ± 10.17	**0.001**
Bladder Capacity (mL)	591.53 ± 214.43	617.82 ± 223.9	0.709
BMI (kg/m^2)	29.21 ± 2.87	26.61 ± 3.84	**0.044**
Qmax (mL/s)	15.17 ± 10.47	24.5 ± 11.2	**0.019**
Voided Volume (mL)	194.18 ± 110.01	380.45 ± 255.25	**0.024**
PVR (mL)	44.72 ± 29.04	55.74 ± 64.41	0.435
VAS	4.38 ± 2.75	4.76 ± 2.73	0.667
ICSI	11.45 ± 7.01	10.57 ± 4.25	0.7
ICPI	8.72 ± 6.7	9.85 ± 3.82	0.604
OAB-V8	12.84 ± 12.52	17.2 ± 9.8	0.268

All continuous variables are presented as mean ± standard deviation (SD).

40 patients (mean age 48.5 years; 82.5% female) were included; mean hydrodistension bladder capacity was **618.9 ± 215.4 mL**.

Bladder capacity was negatively correlated with ICSI (p=0.027) and positively correlated with **Qmax and voided volume**; all symptom scores were positively correlated with each other.

Glomerulations were not associated with symptom scores, but patients with glomerulations had significantly lower **Qmax** (p=0.019).

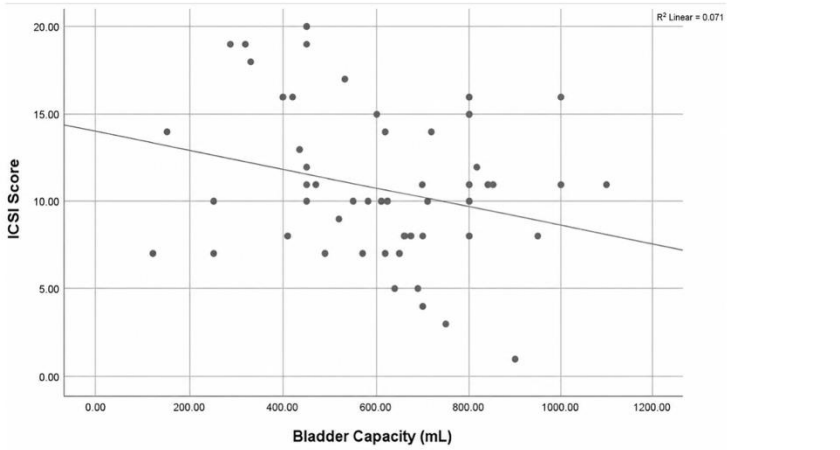

Figure 1. Correlation between bladder capacity and Interstitial Cystitis Symptom Index (ICSI) scores

The scatter plot demonstrates the distribution of ICSI scores relative to bladder capacity measured under general anaesthesia. The regression line indicates a general trend, suggesting that while a relationship exists, symptom severity is also influenced by factors beyond maximum bladder capacity under anaesthetic.

A negative correlation has been identified between bladder capacity and ICSI score in patients with BPS.