Non-Invasive Bladder Test Report

Patient: First and Last Name
Office: Urology Practice
Date of Birth: 1/1/1969

Study Description

A non-invasive bladder test was performed 1/23/2018, 4:38 PM on [Patient Name], a 53-year-old male. The test used the CT3000 instrument and a cuff test technique to measure bladder pressure noninvasively. The principle of the CT3000 Cuff Test is similar to that of blood pressure measurement. When the patient is ready to void, a small pneumatic cuff is fitted around the penis. When voiding has commenced, the cuff automatically inflates at a rate of 10 cm H₂O per second until flow is interrupted. The cuff pressure required to interrupt flow is equal to bladder pressure. Once the flow is reduced to zero, the cuff rapidly deflates, allowing flow to resume. This cycle is repeated until voiding is complete, which is typically 3-4 times.

To interpret the test, the maximum flow (Q_{max}) and highest pressure at flow interruption (P_{CuffInt}) are plotted on a specially-constructed nomogram (1) shown below. This nomogram is based on the ICS nomogram (2) modified to account for the lack of an abdominal pressure, and the effect of measuring pressures at zero flow rather than at full flow as in invasive cystometry.

Study Results

An automatic analysis algorithm has calculated the pressure/flow point based on the inflations in this study. When plotted onto the modified nomogram this calculated pressure/flow point lies in the nomogram quadrant that suggests a finding of Obstructed.

Abdominal EMG was measured during the study and no abdominal straining was detected.

Perianal EMG was measured during the study. Elevated perianal EMG levels were detected during voiding. Instability was detected.

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(2) ICS Nomogram – International Continence Society.
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Pressure-Flow Data
- Total Voided Volume: 322ml
- Max Flow: 9ml/s
- Cuff Interruption Pressure: 127cmH₂O

Abdominal EMG
- Baseline: 0.73uV
- 100% MVC: 142.94uV
- Average EMG during void: 7.59uV
- Relative standard deviation during void: 208% of baseline

Perianal EMG
- Baseline: 0.70uV
- Average EMG during void: 2.22uV
- Relative standard deviation during void: 249% of baseline