

PETROS 'PELVIC EVALUATION' PROTOCOL

1. Patient arrives with naturally filled bladder to a reasonably comfortable volume. The patient is gowned as appropriate for this testing.
2. Patient is stood and a special pre weighed numbered pad is positioned at the external meatus. The patient is instructed to do 10 coughs, each upon instruction. Each pad is later weighed to determine volume of urine loss (if any) for each 'cough stress' cough.
3. Another pad is used and the patient instructed to do 10 'star jumps', each upon instruction. Each pad is later weighed to determine volume of urine loss (if any) for each 'jump stress' cough.
4. Patient is positioned supine on exam. Couch with legs slightly raised and bent. Patient catheterised with dual lumen UPP catheter. Ideally the catheter is oriented such that the urethral pressure sensing port is anterior facing.
5. Start data acquisition and view waveform scrolling. Connect the catheter to the pressure transducers and flush through to remove all air bubbles. Turn on both lumen infusion stopcocks. Hold the distal end of the pressure catheter at the height of the centre (datum) of the external pressure transducers. Zero balance all channels. Ensure all channels read zero (+/- max 3cmH₂O). Ensure that the datum level of the transducers approximates the same level as the symphus pubis. Introduce the catheter into the bladder. Ask the patient to cough to check both pressure channels are operational and both sensing ports record the same (bladder) pressure.
6. Withdraw catheter until Pura increases upon reaching the bladder neck. Reinsert until the Pura port is again just in the bladder.

A) RESTING URETHRAL PRESSURE MEASUREMENTS Note the cm marking on the catheter and then slowly withdraw the catheter until the Pura channel starts to reduce significantly and note the distance the catheter was withdrawn (usually 3 to 5 cm). This should have showed a pressure contour of approximately (not critical) the same 3 to 5 cm as the urethral length. Pull a little further until the pressure reduces to zero at the external meatus.

B) COUGH STIMULUS URETHRAL PRESSURE MEASUREMENTS Reinsert the catheter until again both sensing sites are in the bladder and repeat the procedure as for 6a.

- At the point where Pura approximates the proximal urethra value (by comparing with the pressure vs. length on the first pull back) stop withdrawing and ask the patient to cough.
- Continue to withdraw until the Pura value is similar to the mid-urethral Pura value (by comparing with the pressure vs. length on the first pull back) and again ask the patient to cough.
- Continue to withdraw until the Pura value is similar to the distal-urethra Pura value (by comparing with the pressure vs. length on the first pull back) and again ask the patient to cough.
- Complete withdrawal (to show on the recording a complete profile).

NOTE: Utilising the Acquidata split screen mode significantly assists in this process as the first non-cough profile is always available as a reference template at the left side of the screen.

C) VALSALVA STIMULUS MID URETHRAL PRESSURE. Reinsert the catheter until again both sensing sites are in the bladder and repeat the procedure as for 6a.

- At the point where Pura approximates the mid-urethra value (by comparing with the pressure vs. length on the first pull back) stop withdrawing and ask the patient to perform a valsalva maneuver .

D) SENSORY URGENCY HANDWASH TEST Leave the catheter in the approx. mid-urethral position, replace fresh pad at the patients external meatus and reposition the patient to a sitting position. Turn on water sound and ask the patient to mimic handwashing in a bowl of water. If the patient senses urgency press the F10 'Handwashing' event comment key. After this test stop the data acquisition and remove the patient pad for later weighing if there was urine loss.

E) SUPPORTED URETHRA - COUGH STIMULUS URETHRAL PRESSURE MEASUREMENTS

Return the patient to the supine position and reinsert the catheter until again both sensing sites are in the bladder. If the repositioning of the patient requires a re-zero balance of the pressure channels do this at this point then repeat the procedure as for 6a.

- Apply mid-urethral support as described by Dr. Peter Petros during all three measurement points in this test phase.
- At the point where Pura approximates the proximal urethra value (by comparing with the pressure vs length on the first pull back) stop withdrawing and ask the patient to cough.
- Continue to withdraw until the Pura value is similar to the mid-urethral Pura value (by comparing with the pressure vs length on the first pull back) and again ask the patient to cough.
- Continue to withdraw until the Pura value is similar to the distal-urethra Pura value (by comparing with the pressure vs length on the first pull back) and again ask the patient to cough.
- Complete withdrawal (to show on the recording a complete profile).

NOTE: Utilising the Acquidata split screen mode significantly assists in this process as the first non-cough profile is always available as a reference template at the left side of the screen.

KIVVINO PELVIC FLOOR ANALYSIS PROTOCOL

1. Ensure the Save As file naming has been done. Suggested is Surname/Initial/Date (or I.D) eg <Panatsopoulos T 21/4/00>
2. Open customised Data Pad and ensure that it has not got any previous measurement values in the measurement recording cells.
3. Display the start of the recording on the screen by clicking on a part of the chart screen behind the DataPad. Scroll to the start with the RESTING URETHRAL PRESSURE MEASUREMENTS phase data.
4. Using the mouse and cursor, use the 'add comment' feature on each of the three (proximal/mid/distal) urethral locations. ie at the first proximal urethra point click (once) the waveform at the desired location. Then press Fkey F1 (Prox Pura Rest). At the second mid urethra point click (once) the waveform at the desired location and then press Fkey F2 (Mid Pura Rest). At the third distal urethra point click (once) the waveform at the desired location and then press Fkey F3 (Distal Pura Rest). The points for all pressure measurement locations for test phase **A** will be now tagged with event comments.
5. Using the process described in 4 above carry out the event tagging for the two test phases **B**) and **E**)
6. Now to add the values for these measurement points follow the following procedure:
 - Use the display scaling controls (lower right corner of Uromac window) expand the timescale a factor of two clicks to show a 'faster than the recorded display scaling' (use the 'close up' mountain range icon as used on many cameras to do this).
 - Starting at the first event comment move the cursor EXACTLY over the event comment line (vertical dotted line) and double click the mouse button. The comment menu label will momentarily flash as the data on all channels at that point are transferred to the Data Pad.
 - If the alignment with the event comment line is not correct the values in the data pad will be correct but the event label will be incorrect. It will bear the comment label from the previous measurement.

At the completion of this all measured values, including the urethral closing (difference) pressures will be contained in a printable multi-column spreadsheet, for transcription (export) to whatever final patient report format is used at each site.

GENERAL STATEMENT OF RESPONSIBILITY

Please note that prior to 5 Jan 1999 there was no request to, nor decision by, Neomedix to incorporate any form of special measurement system into their Acquidata systems. Acquidata systems supplied to the AAVIS users were to operate as a computer based equivalent to conventional chart recorder technology, and this they do exceedingly well. We have taken the features past this point with this user preconfigurable 'spreadsheet like' *Datapad*.

As the recordings required by AAVIS are quite dissimilar to 'standard' ICS urodynamics testing the normal automated UroReport will be of no value. It must be understood that this attempt to try to assist in the final reporting process is purely voluntary by Neomedix and has been done with no documented guidelines or examples from AAVIS or Dr. Petros.

The company can in no way be held responsible for any anomalies or inelegancies in the analysis process at this stage. No Urodynamics system on the market has available any AAVIS or KIVVINO suited analysis at this time. Neomedix will be evolving this at a pace proportional to the documented assistance from Dr. Petros and as research funding is available within Neomedix Systems.

We support AAVIS and the development of its Integral theory concepts but developments cannot be rapid in this environment.

Neomedix hopes that users are understanding of this situation.