

## INTRA AND INTEROBSERVER ANALYSIS OF PELVIC FLOOR 3D ULTRASOUND OF CONTINENT WOMEN WHO UNDERWENT TVT-O SURGERY THREE YEARS AGO USING OMNI VIEW

### Hypothesis / aims of study

**HYPOTHESIS:** To assess intra and interobserver reproducibility of measurements in 3D ultrasound of the pelvic floor using rendered image and the Omni View plan in continent women who underwent urinary incontinence surgery, using transobturator polypropylene tape.

### Study design, materials and methods

A cross sectional study with 39 patients who underwent treatment for stress urinary incontinence with transobuturator sling (TVT-O) at Urogynecology and Vaginal Surgery Sector. This research received approval from the local ethics committee. The ultrasound examinations were performed 3 years after surgery, with the patient in the gynecological position, with empty bladder, using the Voluson 730 Expert - General Electric, with a convex volumetric transducer (4-8W) with acquisition angle of 85 degrees. The images were evaluated with 4D View program, with the line of sight in the pubis, urethra and tape to obtain the rendered image where we performed measurements of the distance between the pubis and urethra (PU) between the urethra and the tape (UF) and suburethral angle between the branches of the tape (AO). After this, the same measures at the plan Omni View were performed. The measurements were performed by two observers with three years of experience in three-dimensional ultrasonography with Voluson 730 Expert GE. The first observer (major) performed two measures of each variable with an interval of 7 days in each 3D view and Omni view. The second observer performed a single measurement for each variable. The intraclass correlation coefficient were utilized for calculating the intra and interobserver variability.

### Results

39 patients aged between 33 and 77 years and an average of 53 years were evaluated. The values of body mass index (BMI) ranging between 20.7 and 44.7, with a mean of 30.67 kg per m<sup>2</sup>. The number of previous births ranged from 1 to 10, with an average of 3 births. The intra observer and inter observer variability of each measure, at the Rendered Image and Omni View, are described in the tables below:

Table 1: Analysis of intraobserver reproductibility of Rendered Image

Parameters	ICC (CI 95%)	P
AO	0,726 (0,537- 0,846)	<0,001
PU	0,778 (0,61 -0,877)	<0,001
UF	0,394 (0,097 -0,628)	0,006

Table 2: Analysis of interobserver reproducibility of Rendered Image

Parameters	ICC (CI 95%)	P
AO	0,877 (0,779- 0,934)	<0,001
PU	0,933 (0,877 -0,964)	<0,001
UF	0,554 (0,295 -0,738)	<0,001

Table 3: Analysis of interobserver reproducibility of Omni View

Parameters	ICC (CI 95%)	P
AO	0,798 (0,649- 0,888)	<0,001
PU	0,728 (0,541 -0,847)	<0,001
UF	0,269(-0,044 – 0,535)	0,045

Table 4: Analysis of reproducibility of Omni View versus Rendered Image

Parameters	ICC (CI 95%)	P
AO	0,879 (0,783- 0,934)	<0,001
PU	0,726 (0,537 -0,846)	<0,001
UF	0,311 (0,002 -0,567)	0,024

### Interpretation of results

Our study demonstrated good intra and interobserver variability for Rendered Image and Omni View in the evaluation of the pelvic floor, with ICC satisfactory and excellent in parameters.

### Concluding message

The Omni view proved to be a good software to visualization of the structures of the pelvic floor and the tape, being a good method to carry out the examined measures, with good intra and inter observer reproducibility and comparable with the rendered image.

### Disclosures

**Funding:** No **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** Comitê de Ética e Pesquisa da UNIFESP **Helsinki:** Yes **Informed Consent:** Yes

