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CORRELATION BETWEEN UROFLOWMETRY AND THE ANALOGICAL UROFLOWMETRY (ANUF) PICTOGRAM IN PATIENTS WITH BPE/LUTS

Hypothesis / aims of study

This prospective study was designed to assess the correlation between the ANalogical UroFlowmetry (ANUF) pictogram and the results of uroflowmetry in Brazil. This new pictogram has been previously validated by Rogel et al (1) in Europe and is composed of four images representing four standing men with four decreasing urine streams.

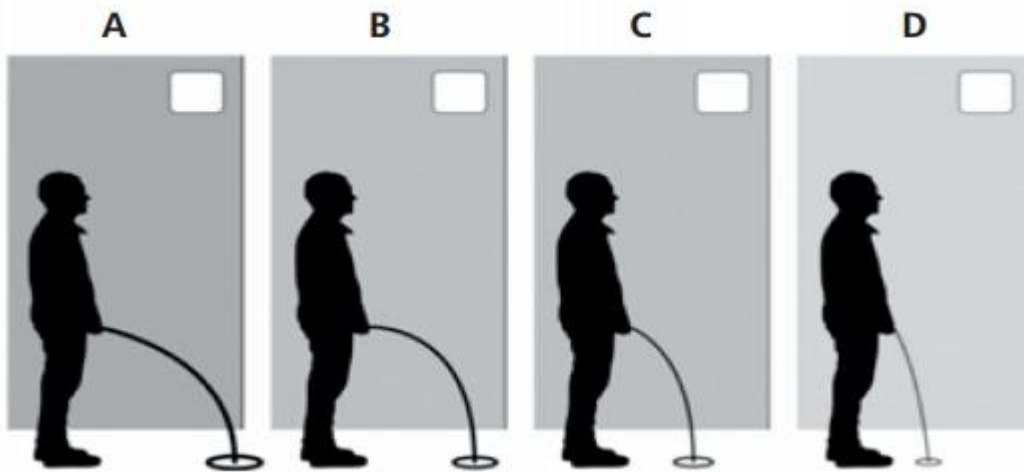
Study design, materials and methods

Male patients aged 40 years or older, referred for uroflowmetry due to lower urinary tract symptoms were enrolled from Mar 2016 to Feb 2017. Just before urofluxometry, they were requested to select which image better represented their usual flow according to the ANUF. Only patients who were able to void 150 ml or more were included in the analysis. Men with history of prostate surgery or neurological disease were excluded. To evaluate the association between IPSS, Q(max) and Q(ave) with the selected image, ANOVA and Tukey Test (or multiple comparisons) as well as lineal regression and Pearson correlation were performed.

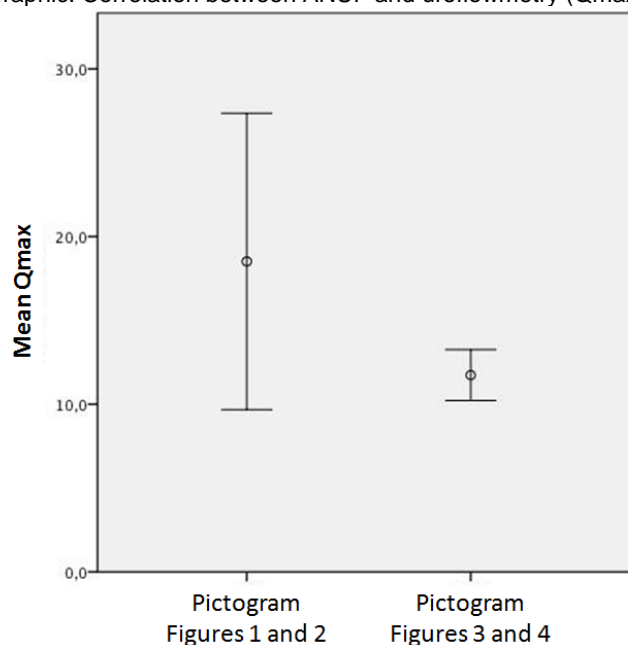
Results

205 patients were enrolled and 50 fulfilled the inclusion criteria. Mean age was 60.96 ± 11.61 years. Mean IPSS was 14.85 ± 7.79 . Mean Q(max) and Q(ave) were 12.49 ± 6.22 and 6.93 ± 2.81 ml/seg. Statistically significant positive correlation was found between ANUF and total IPSS. Mean IPSS according to the ANUF images (A to D - strongest to weakest flow) was 11.75, 8.67, 14.76, and 20.11 points, respectively ($p=0.077$). Statistically significant negative correlations were found between ANUF and uroflowmetry parameters (Qmax and Qave). Mean Qmax was 17.32, 20.1, 11.34, and 12.14 ml/seg, respectively (ANUF A to D) ($r=-0.44$; $p=0.001$). Mean Qave was 10.27, 7.86, 6.49, and 6.77 ml/seg, respectively (ANUF A to D) ($r=-0.5$; $p=0.011$).

Figure: ANUF Pictogram



Graphic: Correlation between ANUF and uroflowmetry (Qmax)



Interpretation of results

Although the inherent limitations of such pictogram, which represents a subjective analysis of the urinary flow according to the perception of the patients, the results of our study demonstrated statistically significant associations between the uroflowmetry parameters and the ANUF images.

Concluding message

The ANUF pictogram seems to be useful, inexpensive and understandable tool to estimate the Q(max) and Q(ave) in situations where only an approximated value is required or in the scenario where uroflowmeter is not available.

References

1. Rogel R., et al. Correlation between uroflowmetry and a new visual pictogram in patients with lower urinary tract symptoms: Analogical uroflowmetry (ANUF). In: EAU 16, 2016, Munich, Resource Centre EAU 16, ePosters, Abstract 99. Available online: .

Disclosures

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