The effect of a 6 Ch urodynamic catheter on Maximum flow rate of pressure /flow study. Does it cause any obstruction?

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Hypothesis / aims of study

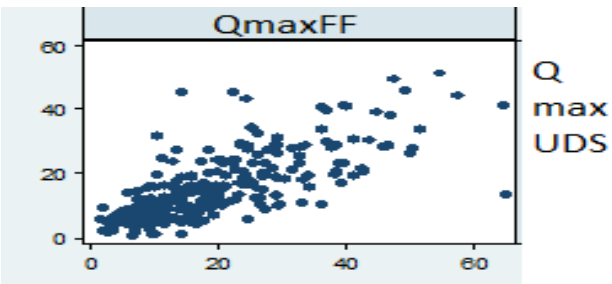
To evaluate the effects of catheterization with an 6 Ch urodynamic catheter on the maximum flow rate of voiding cystometry (QmaxUDS) versus free uroflowmetry (QmaxFF).

Study design, materials and methods

In **280** patients **(♂:127, ♀:153)** both free uroflowmetry and pressure-flow studies were performed. A 6 Ch urodynamic catheter (Medtronic®) was used for bladder filling and vesical pressure measurement. The QmaxFF and QmaxUDS were statistically analyzed with single linear regression model, in order to identify any possible correlation. Sex was evaluated as confounding factor. The statistical package STATA 13 was used for the statistical analysis.

Results

Mean age (SD) of patients was 50.15 (17.35). We have explored the possible correlation between QmaxFF and QmaxUDS.



QmaxFF	coefficient
Sex	2.731285
QmaxUDS	.8490074
constant	4.5310
Adj R-squared = 0.5641	

The following mathematical formula emerged:

QmaxFF= 4.5+2.7*sex+0.85QmaxUDS **(for sex: male =1, female =0),**

=>♂:QmaxFF=7.2+0.85QmaxUDS ♀:QmaxFF= 4.5+0.85QmaxUDS

The abovementioned model can explain 56% of the data variability.

Concluding message

Although the 6 Ch urodynamic catheter supposed to be an acceptable means for reliable urodynamic investigation, a significant effect on QmaxUDS is noticed for males and for lower values of Qmax.

Disclosures Statement

None