Clinical epidemiology of urodynamics in women: Normal values of pressure flow studies, quantification of detrusor voiding contraction and bladder outflow obstruction and associations with PVR and age.

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ABSTRACT

We present an analysis of PFS studies in a wide age range of symptomatic women without any relevant neurological or anatomical abnormalities, with the aim of providing value range of PFS parameters, associations with flowrate, PVR and with aging.

METHODS

Women (n=1088) who presented with LUTS between 2010 and 2020 in our department, who were able to void during standard urodynamic testing were included in this analysis. Indication for UDI has been: SUI- 8%; OAB-s 15%; UUI-s 13%; MUI-s 42%; Voiding-s 10% and other (12%). Patients presenting with pain or recurrent UTI were not included. PVR was measured and PFS parameters were assessed after pressure peaks and flowrate corrections. BCI and WFmax are calculated to grade detrusor voiding contraction – contractility, apart from BOOI and URA to grade bladder outflow resistance.
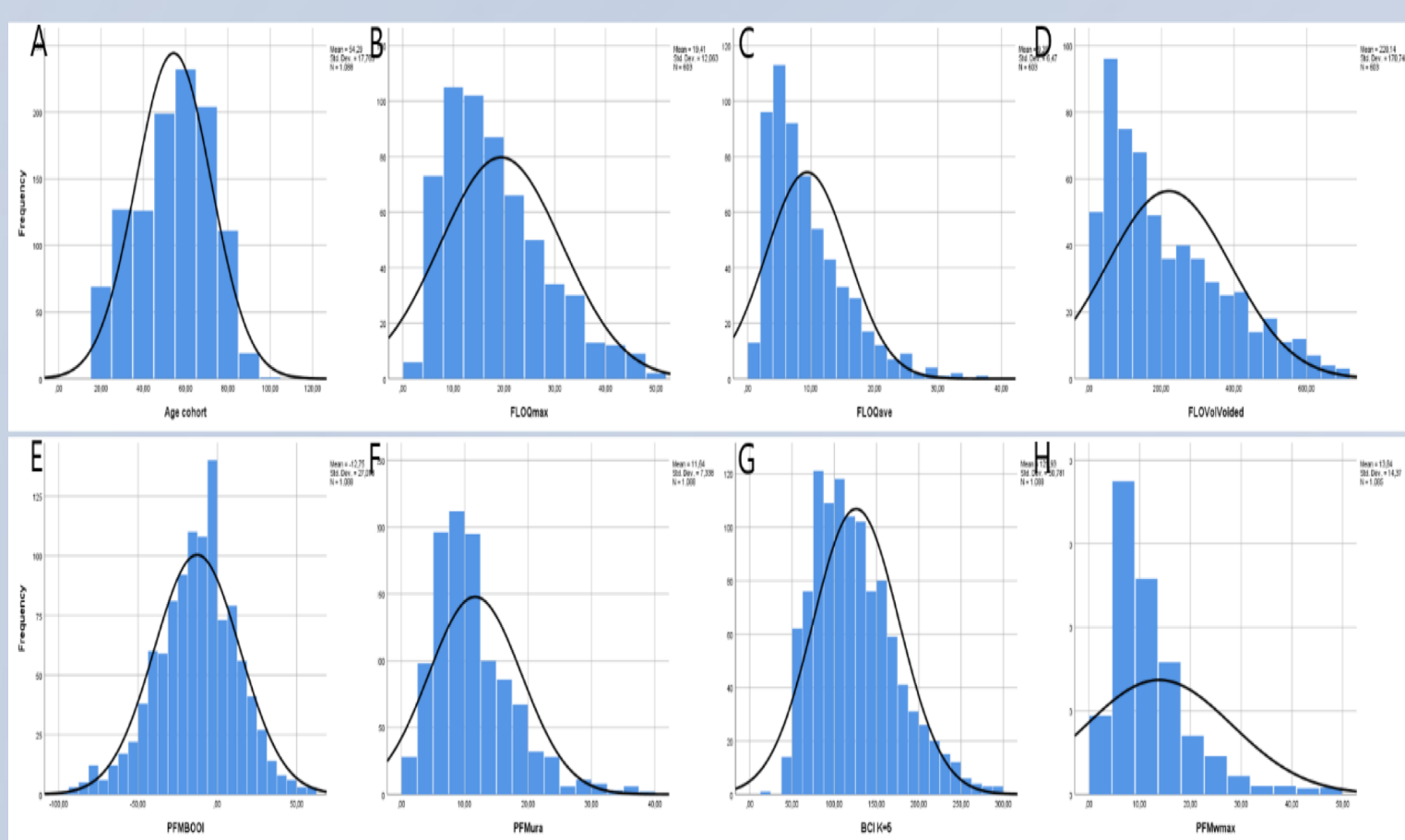

RESULTS

The mean Qmax is 19.41ml/s and mean PFS pQmax is 26.87cm of H_2O. The mean URA, Wmax, BOOI, BCI are respectively 11.64 cm of H_2O, 13.84 W/m^2, -12.75 and 125.93. The mean PVR is 40.77ml.

Figure 1: showed how age(A) Qmax (B) Qmean (C) and Voided volume were distributed and also the PFS parameters (E) BOOI, (F) URA (G) BCI and (H) Wmax.

Figure 2: showed Qmax and Wmax significantly declined with age.
 BOOI and URA slightly declined with age.
Graph D decipited 67.8 % falls under low pressure and low flow rate area and only 1.4% have outflow obstruction.
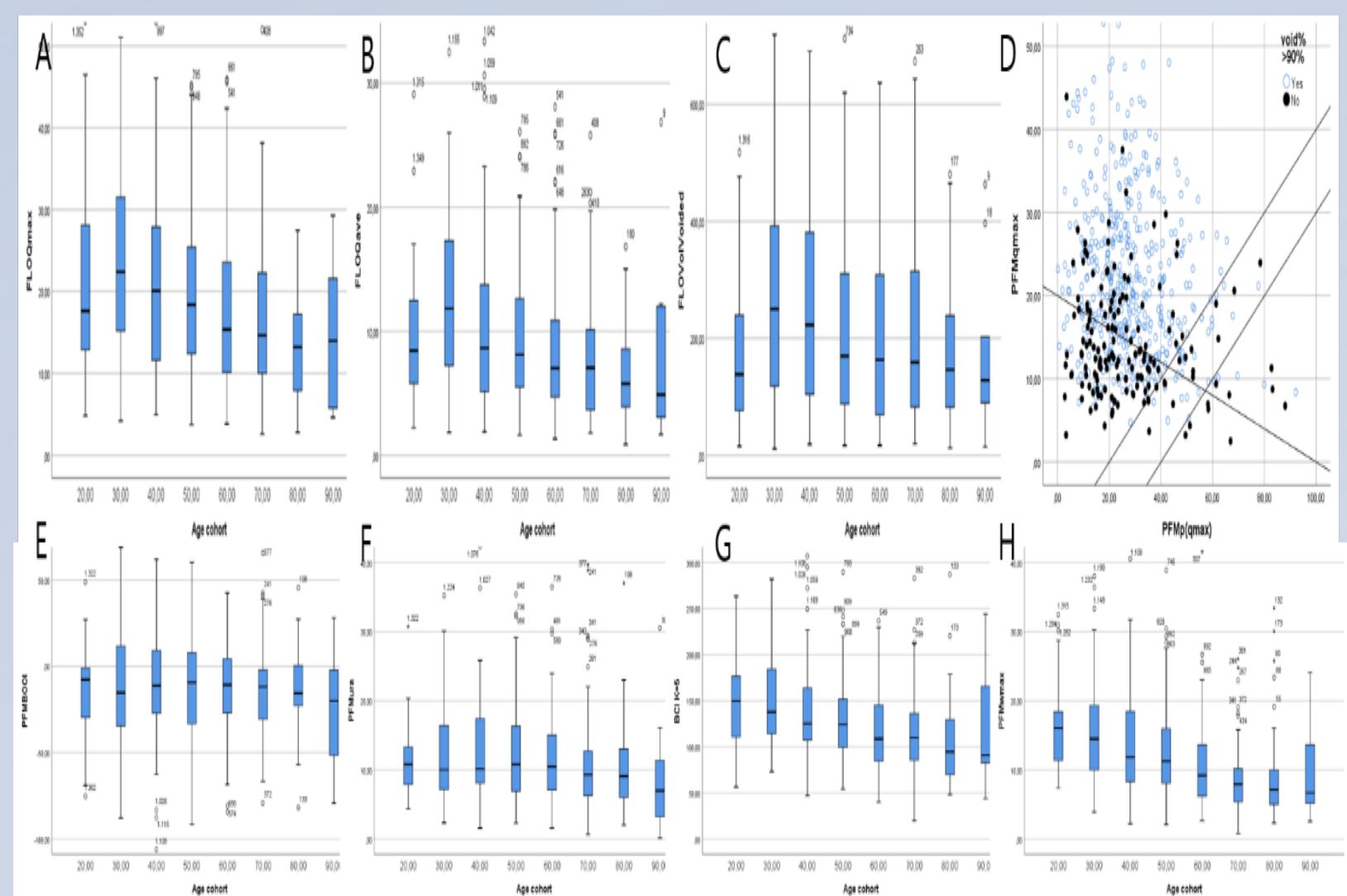
CONCLUSIONS

Association of PFS parameters with age shows specifically the relevance of age related decline of detrusor voiding contraction strength.

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