

URINARY FLOW RATE OF ASSYMPTOMATIC MEN: DOES IT DECREASE WITH AGING?

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Objectives :

To correlate uroflow with clinical and ultrasonographic findings in asymptomatic men.

Material and Methods:

From May to October 2009, we prospectively evaluated asymptomatic men underwent general health check up program. Inclusion criteria were: men over than 40 years, IPSS under 10. It was excluded men with overactive bladder symptoms, neurological disease, PSA greater than 2.5 ng/dl. The evaluation included serum PSA, uroflowmetry determination with volume greater than 150 ml (Dynamed, Inc – Sao Paulo- Brazil), digital rectal examination, ultrasound evaluation of prostate size and post voiding residual. Statistical analysis was performed by specific tests - ANOVA and multiple linear regression.

Results :

We evaluate 500 men with mean age of 49 years old (range: 40 to 80). There was a significant increase in IPSS and prostate size and a decrease in all uroflowmetry parameters (Table 1).

	40-49	50-59	>60	<i>p</i>
N	276	173	51	
IPSS	0,5+/-1,3	2,2+/-3,9	5,4+/-5,5	0,001
Flow time	30,4+/-13,6	35,1+/-16,6	38,3+/-23,2	0,006
Peak flow	17,6+/-6,6	16,2+/-6,7	14+/-6,7	0,001
Average flow	11,3+/- 4,7	10,1+/-4,6	8,3+/-4,5	0,013
Prostate size	23,2+/-6	30,1+/-10,1	35,5+/-16,7	0,026

Patients between 40-49 years old had similar flow rate than patients between 50-59 years old ($p = 0,060$) and had a greater flow rate than those over than 60 years old ($p < 0,001$). Multiple linear regression showed that peak flow presented significant correlation with IPSS ($p < 0,001$) and prostate size ($p < 0,026$). There was a decrease in maximum flow rates of 0.072 for each prostate gram enlargement and 0.388 for each increase in the IPSS value. Furthermore, there was a decrease in the average flow of 0.050 for each gram of prostate enlargement and 0.294 for each increase in the IPSS absolute value.

Conclusions

There is a significant decrease in the urinary flow rate of asymptomatic men, particularly after 60 years old. It seems to be associated with an increase in prostate size and IPSS.

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Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	Hospital Israelita Albert Einstein Ethical Comitée
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes