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AGING EFFECT ON THE PELVIC NEUROPHYSIOLOGY OF 56 MALE PATIENTS

Hypothesis / aims of study
Recent findings suggest deterioration of nerve conduction as an aging process. Herein, we incited our attention to evaluate pelvic neurophysiological tests in two groups of males according to their ages, to better clarify this possibility.

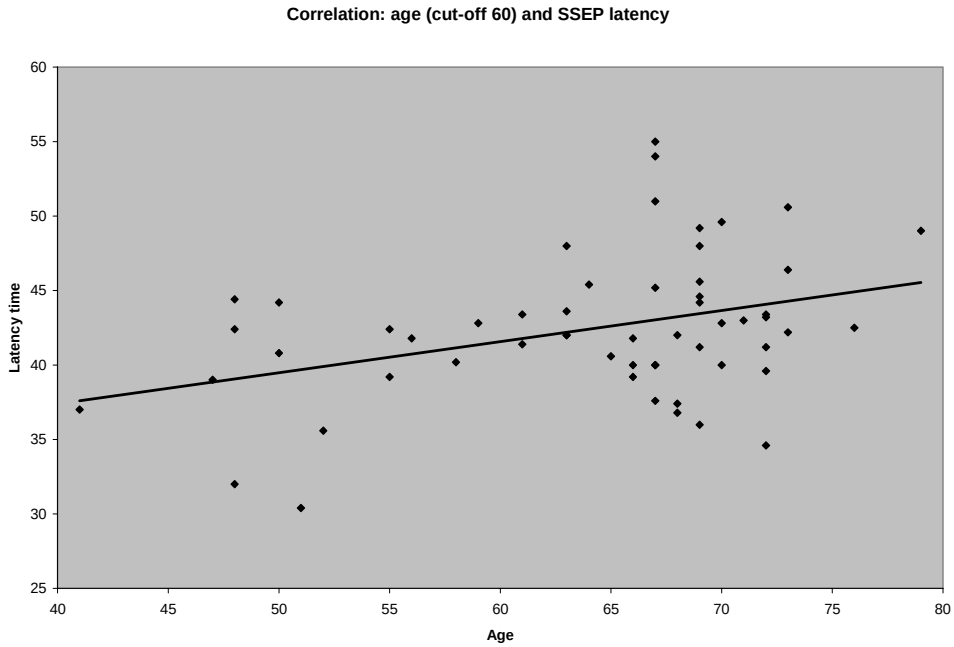
Study design, materials and methods
From February 2003 to February 2005, we developed a prospective study with 56 consecutive male patients with localized prostate cancer, which signed an informed consent according to the institutional ethics committee. After have been considered neurologically normal, all patients were submitted to neurophysiologic evaluation of the pelvic floor through sensory threshold and Somatosensitive Evoked Potential (SSEP), and sensory threshold and latencies of the Pudendo-urethral (PU), Pudendo-anal (PA) and Urethro-anal (UA) reflexes.

Results
Ages ranged from 41 to 79 with median of 67 years old. Comparing patients less than 60 years old with those equal or above this age, a statistical significant difference was registered between the two groups. Patients older then 60 years have a significant higher SSEP latency (p=0.007). Also, a direct positive correlation was encountered with age and latency of SSEP (p=0.005 Pearson's test). (Table 1 and figure 1).

Table 1: Pearson's test. Age cut off 60 years and neurophysiological tests.

Test	r	p Value
SSEP thres	0.009	0.950
SSEP lat	**0.367**	**0.005**
UA thres	0.104	0.452
UA lat	0.053	0.706
PA thres	0.113	0.410
PA lat	0.204	0.136
PULIM	0.113	0.410
PU lat	0.019	0.892

SSEP thres – pudendal somatosensitive evoked potential threshold. SSEP lat – pudendal somatosensitive evoked potential latency. UA thres – urethro-anal reflex threshold. UA lat – urethro-anal reflex latency. PA thres – pudendo-urethral reflex threshold. PA lat – pudendo-anal reflex latency. PU thres – pudendo-urethral reflex threshold. PU lat – pudendo-urethral reflex latency.



Interpretation of results

We found evidence that patients older than 60 years have modifications in the SNC in comparison to those younger than this age.

Concluding message

An increase in the SSEP latency in males older than 60 years old was encountered in our analysis. This information favors the possibility of age related differences involving the CNS. A potential consequence of this fact in geriatric surgery and in development of urinary incontinence is suggestive but is still to be determined.

FUNDING: **FAPESP**