Neurophysiological Study in Overactive Bladder

Thesis

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List of Abbreviations

Abbr.	Full-term
AUA	: American Urological Association
BMI	: Body mass index
BPH	: Benign prostatic hypertrophy
CMAPs	: Compound muscle action potentials
CNEMG	: Concentric needle EMG
EAS	: External anal sphincter
EMG	: Electromyography
EUS	: External urethral sphincter
IAS	: Internal anal sphincter
ICS	: International Continence Society
MRI	: Magnetic resonance imaging
OAB	: Overactive bladder
PAG	: Periaqueductal gray
PMC	: Pontine micturition center
PNTML	: Pudendal nerve terminal motor latency
PSSEP	: Pudendal somatosensory evoked potential
PTNS	: Peripheral tibial nerve stimulation
PVR	: Postvoid residual volume
QOL	: Quality of life
RAIR	: Recto-anal inhibitory reflex
SD	: Standard deviation
SEP	: Somatosensory evoked potentials
SPSS	: Statistical package for social science

SSQ : Symptom score questionnaire

SUFU : Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction

UUI : Urgency urinary incontinence

VD : Vaginal delivery

VPFMC : Voluntary pelvic floor muscle contractions

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ABSTRACT

Objectives:
We have aimed to investigate possible association of subtle neurogenic affection in idiopathic overactive bladder and to determine the role of biofeedback and electrical stimulation in its management.

Material and methods:
A cross-sectional cutoff study in a series of 30 women with idiopathic overactive bladder and 10 healthy women was carried out. The study consisted of symptom score questionnaire and determination of pudendal nerve terminal motor latency, sacral reflexes latencies, PSSEP P1 latency and needle electromyography of the external anal and urethral sphincters. We also gave12 sessions of biofeedback and electrical stimulation.

Results: A highly significant increase of pudendal nerve terminal motor latency time, sacral reflexes latency in our patients than controls, non significant difference between them regards PSSEP P1 latency. There was a picture suggestive of neuropathy in 22 patients (73.3%) during anal EMG and in 23 patients (76.6%) during urethral EMG. Regarding the effect of physical therapy sessions there was a highly significant increase of the score of the questionnaire after sessions.

Conclusions:
There is possible attributing element of neuropathic affection in patients with idiopathic overactive bladder. Biofeedback therapy and electric stimulation to pelvic floor muscles are effective in improvement of symptoms of overactive bladder

Key Words: Overactive bladder, Pudendal nerve terminal motor latency, Sacral reflexes, Anal electromyography, Urethral electromyography.