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ANALYSIS OF RHYTHMIC RECTAL CONTRACTIONS DURING FILLING CYSTOMETRY IN WOMAN.

Hypothesis / aims of study

Rhythmic or random rectal contractions, independent of bladder activity are frequently observed during filling cystometries. Usually they are imputed either to a neurological disease [1], or to ageing [2].
The aim of this retrospective study was to try to find if the rhythmic rectal contractions (RRCs) were associated with a specific lower urinary tract symptom or/and a urodynamic diagnosis.

Study design, materials and methods

The population consisted of 534 consecutive women without gastro-intestinal complaint who underwent a urodynamic session in our laboratory between January 2005 and December 2006 for lower urinary tract symptom. The population was divided in two sub-groups: 382 patients without a history of neurological disease (**non-N**) and 152 with a history of neurological disease (**N**) (stroke, multiple sclerosis, lumbar injury…).
Filling cystometry was performed at a filling rate of 50 mL/min (normal saline at room temperature) until maximum bladder capacity. Vesical and urethral pressures were recorded using a triple lumen catheter 10F.
Rectal pressure was measured using a punctured balloon filled with 2 mL of saline solution in order to avoid pressure artefacts.
Pressure transducers were zeroed according with the ICS recommendations.
RRCs were defined as changes in the rectal pressure of at least 3 cm H_2O independent of the total vesical pressure.

Results

Sixty nine (12.9%) patients exhibited rhythmic rectal activity: 47 (12.3%) in the **non-N** group and 22 (14.5%) in the **N** group. The mean age was 65.5±15.2 years (**non-N**) vs 62.7±18.0 years (**N**).
RRCs had a low frequency: 1 – 4 /min; their amplitude was ≤ 15 cm H_2O in 45 **non-N** (8.2 ± 4.3 cm H_2O) and 22 **N** patients (8.0 ± 3.3 cm H_2O), and > 15 cm H_2O in only 2 **non-N** patients.
RRCs occurred during all the filling phase respectively in 30 **non-N** and 19 **N** patients, appeared at first desire to void in only 9 **non-N** and disappeared at first desire to void in 8 **non-N** and 3 **N**.
The table describes the incidence of urge syndrome and detrusor overactivity (ICS definition):

	non-N	**N**	p
Urge syndrome	32 (68.0%)	13 (59.1%)	n.s.
Detrusor overactivity	10 (21.3%)	10 (45.5%)	.04

Isolated stress urinary incontinence was observed in only 7 **non-N** patients (mean age 56.8 years) whom 5 had RRCs during all the filling phase.

Interpretation of results

In the studied population, occurrence of RRCs is not significantly associated with a history of neurological disease (14.5% vs 12.3%). Patients with RRCs are significantly older than the negative population (64.6±16.1 years vs 56.3±17.9 years; p = .0002). Urgency is frequently associated with RRCs whatever the sub-group. At the opposite, RRCs occur more frequently in patients with a history of neurological disease who have obvious detrusor overactivity during the cystometry.

Concluding message

RRCs cannot be considered as artefactual events during filling cystometry in woman. RRCs occur in the older population, are frequently associated with urgency whatever the population (with a history of neurological disease or not). In the population with a history of neurological disease detrusor overactivity is frequent. These findings bring to the fore the role of ageing and possibly of the common neurologic innervation of lower urinary and gastrointestinal tracts in the occurrence of rhythmic rectal contractions.

References

1- Neurourol Urodyn (1995) 14; 73-80
2- Nippon Hinyokika Gakkai Zasshi (1997) 88; 874-9

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HUMAN SUBJECTS: **This study did not need ethical approval because It is a retrospective study but followed the Declaration of Helsinki Informed consent was obtained from the patients.**