

DOES PATIENT ACTIVITY LEVEL AFFECT 24-HOUR PAD TEST RESULTS IN STRESS-INCONTINENT WOMEN?

Hypothesis / aims of study

The 24-hour pad test is an outcome measure that has demonstrated adequate repeatability [1], however this procedure has not been standardised as to the level of activity that should be prescribed. Our aim was to establish whether patient activity levels affect the pad test result in stress-incontinent women, and if so, to develop a standard activity level during the testing period.

Study design, materials and methods

Inclusion criteria were 20 to 80 year old women who presented with a history of pure stress urinary incontinence (SUI), and could understand and write in English. Exclusion criteria was a complaint of prolapse, recurrent UTIs, voiding difficulty or urge urinary incontinence; or not completing the 24-hour pad test procedure (outlined below) correctly.

For this prospective observational study, women completed two 24-hour pad tests and kept a diary of their daily activities during a "normally active" day (involving usual daily activities) and "minimally active" day (involving as little physical activity as possible) in the same week. In a "normally active" day, "usual daily activities" could include sporting activities if these occurred routinely 3-4 times per week. The daily activity level was correlated with pad weight gain and the number of leakage episodes caused by activity (according to the patient diary).

Results

Of 25 women (mean age 52 years, mean BMI 24.99), 20 (80%) had more pad weight gain on their "normally active" day compared with their "minimally active day". Table 1 shows the results for median 24-hour pad weight gain. There was a statistically significant difference between the "normally active" and "minimally active" day for all groups excluding those with a BMI>25. The results for the number of leakage episodes caused by activity follow a similar pattern.

Table 1: Median (IQR) 24-hour pad weight gain (g)

	"Normally-active" day	"Minimally-active" day	Wilcoxon's (P)
Total group (n=25)	9.9 (4.6-39.85)	5.2 (2.7-9.1)	0.001
20-49 year olds (n=13)	9.9 (4.6-46.7)	6.1 (3.85-8.9)	0.048
50-79 year olds (n=12)	8.95 (3.9-36.7)	3.85 (2.2-12.2)	0.009
BMI<25 (n=14)	8.95 (3.3-39.7)	3.0 (1.7-7.0)	0.005
BMI>25 (n=11)	9.9 (5.8-42.8)	6.9 (5.2-120.2)	0.083

Interpretation of results

In women with SUI, increased patient activity levels will increase the degree of leakage as measured by both 24-hour pad weight gain, and the number of leakages due to activity in a patient-kept diary.

Concluding message

When conducting a 24-hour pad test in women with stress incontinence, activity levels should be standardised. Based on these results we suggest advising patients to perform the pad test during a "minimally active" day as this decreases the variation of activity and is a common denominator for women of all ages and all ranges of mobility. For clinical research, conducting the 24-hour pad test during a "minimally active" day may improve its function as a severity measure between patients. Standardisation of other variables affecting the 24-hour pad test should be addressed in future research.

References

1. The repeatability of the 24-hour pad test. International Urogynaecology Journal. 2006; 16:63-68.

FUNDING: No external funding

CLINICAL TRIAL REGISTRATION: This clinical trial has not yet been registered in a public clinical trials registry.

HUMAN SUBJECTS: This study was approved by the South East Sydney and Illawarra Area Health Service Ethics Committee and followed the Declaration of Helsinki Informed consent was obtained from the patients.

