

COMPARISON OF INTRAABDOMINAL AND INTRAVESICAL PRESSURES IN SITTING AND SQUATTING POSITIONS.

Introduction

The effect of posture on the toilet has been well researched in the western toilet setting but not adequately researched in a squatting toilet. There is a hypothesis that micturition syncope is rare in Indian women due to the nature of the toilet that requires squatting. Our initial research presented in IUGA 2008 comparing intravesical pressure and intraabdominal pressures in both sitting and squatting positions showed a slight trend towards increased pressures in the squatting position. The aim of this study is to present our ongoing research findings comparing the 2 pressures in the sitting and squatting positions.

Method

All patients who underwent urodynamics studies in the urogynaecology unit at the Mater Misericordiae Hospital, Townsville and the Penang Hospital, Malaysia, were recruited based on their active ability to squat. We defined "squat ability" as ability to squat with feet flat comfortably for 30 seconds. The intraabdominal pressure (pabd), intravesical pressure (pves) and the detrusor pressure (pdet) were recorded using fluid fill catheters, initially in the sitting position on a western toilet and then in a squatting position on a platform.

Results

A total of 89 patients were recruited for the study. The results of the study are shown in table 1. The average pabd in the sitting and squatting positions were 18.7cm water and 26.1cm water. The average pves in the sitting and squatting positions were 19.1cm and 25.4cm water. The intraabdominal and intravesical pressure difference and the in turn the detrusor pressures in both sitting and squatting positions were statistically significant ($p > 0.00001$).

Table 1: Average pabd, pves and pdet in sitting and squatting positions. (cm H₂O)

Pressure	Sitting	Squatting
pabd	18.7	26.15
pves	19.1	25.4
pdet	0.67	1.95

Conclusion:

Effects of squatting during micturition has not been studied however our study shows statistically significant difference in intraabdominal and intravesical pressures in the squatting position. There is a possibility that this increase in pressures might help in improving both bowel and bladder function.

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Is this a clinical trial?	Yes
Is this study registered in a public clinical trials registry?	No
Is this a Randomised Controlled Trial (RCT)?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	The Penang Hospital ethics committee The Mater Misericordiae Hospital ethics committee
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes