(Abstract 540)
Frequency Volume Chart in the Illiterate Population: A simple solution

Vasudeva P[1], Kumar N[1], Madersbacher H[2]
1. Department of Urology, VMMC & Safdarjung Hospital, New Delhi, India
2. University Hospital, Innsbruck, Austria

Introduction

➤ Frequency volume chart (FVC) of at least 1-day including the first morning void the following day is a reasonable tool to gain insight into voiding habits during normal daily routine.

➤ Wagg A et al developed a bladder diary record for use in illiterate older adults but was limited to number of micturition and incontinence episodes.

➤ The aim of our study was to devise a method of recording FVC data in adult patients, who are illiterate or not sufficiently literate to make a written record

Materials and Methods

➤ Prospective study

➤ Adult patients (=18 years of age) attending the urology outpatient, who as part of their evaluation were instructed to make a FVC , but who were illiterate/ not sufficiently literate to make the FVC themselves.

➤ Included patients were admitted for 1 ½ days starting the evening before.

➤ On admission, the patient received - a) Two measuring jars (one smaller and one larger) b) A box of pebbles, c) 2 small cloth pouches, one yellow coloured and the other black coloured, d) A black marking pen.

➤ Study included : Patient himself, Nursing staff and Investigator/Co - investigator

➤ Role of patient :

1. Discard the first morning sample of urine

2. Thereafter, every time void into smaller measuring jar till the next morning (1st sample of next morning to be included)

3. Mark the upper limit of urine level in smaller measuring jar after the first void. Again mark the upper limit, if the level is higher than the earlier marked level at any subsequent void.

4. Inform the nursing staff after each void, who will come, inspect the smaller measuring jar containing urine and then leave.

5. After the nursing staff leaves, transfer the urine from the smaller measuring jar into the larger measuring jar.

6. Put one pebble from the box into the yellow pouch for each void before going to bed at night.

7. Before going to bed, mark on the large measuring jar (a horizontal line), the level till which it is filled with urine and inform the nursing staff that he/she is going to bed.

8. Each time he/she gets up from sleep to void, continue to follow step 2-6 except that at step 6, for each void, put one pebble from the box into the black cloth pouch

9. For the 1st morning void of the following morning, again follow step 2-6.

10. Transfer the first morning void into the larger measuring jar and mark the large measuring jar (a horizontal line) till the level it is filled with urine. Inform the nursing staff.

11. Deposit the jars, yellow and black pouch, and unused pebbles with the Investigator/Co -investigator

➤ Role of Nursing staff:

1. Note the time and volume of each void.

2. Note the time patient goes to bed at night.

3. Note the volume of urine in the large measuring jar at the time patient goes to bed at night.

4. Note the time patient gets up in the morning (after which he/she doesn't go to bed again).

5. Note the volume of urine in the large measuring jar after patient puts in first morning void.

6. Deposit the recorded data sheet to the Investigator/Co - investigator

➤ Role of Investigator/Co -Investigator :

1. Brief the nursing staff and patients separately about their roles.

2. Once the jars and cloths are returned, interpret and record the:
   a) 24 hours urine production, b) Daytime urine volume,
   c) Nocturnal urine volume, d) Daytime urinary frequency,
   e) Nocturia, f) Average voided volume, g)Maximum voided volume

Fig 1: Items given to the patient at the start

Fig 2: Returned items showing black markings on the jars and pebbles in respective pouches

Results

30 patients , Mean Age 45.1 years , M:F= 2:1

	Patient reported (n=30)	Nursing staff reported (n=30)	P value**
24 hours' urine production	3413.10±1649.5*	3557.58±2125.7*	0.77
Day time urine volume	2772.33±1506.4	2959.67±1981.5	0.68
Nocturnal urine volume	637.93±540.4*	585.51±526.8*	0.70
Day time urinary frequency	10.33±4.29	10.8±4.19	0.67
Nocturia	2.93±3.25*	2.41±2.91*	0.47
Average voided volume	296.64±157.09*	306.03±175.85*	0.83
Maximum voided volume	437.16±209.94	442.50±217.18	0.92

*n=29

Interpretation of results

➤ Patient reported/ Investigator interpreted data was similar to the nursing staff reported data with no statistically significant differences noted between the two.

➤ The method described is feasible and appears to be as reliable and clinically informative as a written FVC.

Conclusion

This is a novel and, to our knowledge, the first attempt to try and capture FVC data in patients who are illiterate/not sufficiently literate to make a written record.

References

1. Abrams P et al. INCONTINENCE 6th edition: 2017, page no. 505-7.
2. Wagg A, et al. Development and testing of a continence record for use with illiterate older women in rural BANGLADESH. https://www.ics.org/Abstracts/Publish/241/000240.pdf.