

PILOT STUDY OF COMPLIANCE WITH A SYSTEM FOR PATIENT SELF-MANAGEMENT OF FLUID INTAKE

Hypothesis / aims of study

This project aims to develop an evidence-based system to give personalised advice in order to assist self-management of fluids. To investigate the response of patients to personalised fluid management advice, a pilot study measured the compliance of patients to suggestions given on the basis of symptoms, bladder diary and fluid intake.

Study design, materials and methods

Recruitment took place at an outpatients urine flow clinic, where patients had been asked to fill in a bladder diary with urine output and fluid intake for up to three days. Patients' height, weight, exercise level and symptomatic complaints were recorded. Recommended fluid intake amounts were based on the US National Academies of Science reference intake guidance [1]. A simple algorithm based on published evidence [2,3,4] was applied and fluid management advice given. Patients were asked to fill in a second bladder diary after two weeks, and differences between the first and second bladder diaries were analysed.

Results

22 patients completed both bladder diaries. 16 of these had been advised to cut caffeine and alcohol from their diet, and 13 had complied. 12 patients had been advised to reduce evening drinks, and 9 had complied. All 6 patients who had been advised to increase fluid intake, and the 1 patient advised to reduce fluid intake, complied with the advice. Compliance with some evidence-based advice was not possible to gauge from the bladder diaries returned, i.e. delaying urination (bladder training), reducing weight and raising their legs in the afternoons.

This pilot study was not designed to measure changes in symptoms, but it is worthy of note that a total of 12 patients out of the 22 found relief from at least one symptom after following the advice given. Of the 13 patients who complied with the advice to remove stimulants (i.e. caffeine, alcohol or saccharine) from their intake, 8 patients had a reduction in daytime micturitions, 4 had an increase and 1 had no change. Of those same 13 cutting stimulants, 3 had reduced nocturia, 2 had an increase and the remainder were unchanged. There were 9 patients complying with advice to reduce evening drinks, and 5 had a reduction in nocturia.

Interpretation of results

The results indicate that when patients are given fluid intake advice that is specific to their symptoms and lifestyle, the majority comply. There will now be a full investigation into the effect of such advice on symptoms, as this study suggests that a number of patients can find relief from symptoms through self-managed changes to fluid intake alone.

Concluding message

Patients given fluid intake advice that is specific to their symptoms and lifestyle tend to comply with the advice. Furthermore, it is likely that many can gain improvement in symptoms thereby.

Fluid management advice given	No. of patients receiving advice ^a	No. of patients complying ^b	Other comments ^c
Reduce fluid intake	1	1	Micturitions reduced from 13 /day to 10 /day
Increase fluid intake	6	6	4 increase daytime micturitions, 0 increase night time micturitions
Cut out stimulants	16	13	10/16 reduced total micturitions, 2 noted urgency stopped, 2 reduced nocturia
Reduce evening drinks	12	9	3/9 reduced nocturia

Table 1. Results of pilot study of compliance with personalised fluid management advice.

^a many patients received more than one piece of advice. The total number of participants was 22.

^b according to the bladder diaries sent in 2 weeks following the advice in clinic

^c this study was not designed to measure changes in symptoms, but some notable changes occurred

References

1. "Dietary Reference Intakes for Water....." US NAS, Washington DC (2004), www.nap.edu/catalog/10925.html
2. BJUI 2008; 102:62-66
3. Int J Clin Pract. 2009; 63(8): 1177–1191.

Disclosures

Funding: NIHR Healthcare Technology Co-operative Devices for Dignity, UK and by North Bristol NHS Trust, UK. **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** South West – Frenchay, UK **Helsinki:** Yes **Informed Consent:** Yes