

SCREENING OF UN-NOTICED URINARY RETENTION IN AN EXTENDED CARE HOSPITAL

Hypothesis / aims of study

Urinary retention and urinary tract infections are common complications of elderly patients admitted into the hospitals for various reasons. Patients with urinary retention are sometimes overlooked especially when the patients are put on diapers and having communication problems or reduced bladder sensation. Screening of post-voided residual urine volume (PVR) for all newly admitted patients into our department has been implemented since May 2005.

This study is to determine the current prevalence of un-noticed urinary retention in elderly convalescent patients and to compare with previous findings.

Study design, materials and methods

This is a descriptive study where all patients admitted into an extended care unit and not having urinary catheter were screened within 24 hours with a portable, non-invasive, ultrasound bladder volume estimating device (BladderScan BVI 3000, Diagnostic Ultrasound Corporation, United States) to obtain the supine PVR value immediately or within 15 minutes post-micturition. Double voiding is encouraged if possible. If the patient was on diapers, an enuresis alarm was attached to the diapers to catch the exact timing of micturition. Urinary retention is defined as having a PVR ≥ 300 ml.

Results

From September to November 2006, 622 patients without urinary catheter on admission were screened. 49 (7.9%) patients were found to have urinary retention. Female patients had a slightly higher prevalence than male patients (9.8% vs 5.9%, $p=0.07$). 16 patients had very big bladders (>700 ml) and 8 patients even had PVR over 999ml which was the upper limit of measurable value by the BladderScan.

The prevalence of un-noticed urinary retention was decreasing over the years (17.3% in 2004 study, 9.7% in 2005 study and 7.9% in the present study).

Interpretation of results

The study showed that urinary retention could easily get un-noticed in elderly patients despite there was big bladder. This was probably because the patients were usually disabled and having diapers for the "overflow incontinence" and were having communication or mental problems or reduced bladder sensation. The exact cause of the urinary retention is still not well-understood and probably multi-factorial.

The prevalence of un-noticed urinary retention was decreasing over the years possibly because of increasing awareness of this condition and more screening of PVR was now performed in the acute hospitals especially for those higher risk patients.

Concluding message

Measuring PVR is now a simple screening procedure and is very effective in identifying patients with un-noticed urinary retention before they develop further complications of renal damage and recurrent urinary tract infections. It is highly recommended as a routine screening procedure for all elderly patients admitted into an extended care hospital.

FUNDING: No funding nor grant for the study.

HUMAN SUBJECTS: This study did not need ethical approval because It is only a descriptive study of the findings obtained in a standard protocol in the hospital. but followed the Declaration of Helsinki Informed consent was not obtained from the patients.