

THE USE OF ABSORBENT PADS INCREASES THE RISK FOR LOWER URINARY TRACT INFECTIONS IN NURSING HOMES RESIDENTS.

Hypothesis / aims of study

Urinary incontinence is a common medical problem in the nursing home population. The aim of this study was to determine whether use of absorbent pads is a risk factor for the development of lower urinary tract infections in nursing home residents.

Introduction

Lower urinary tract infections (UTIs) are a common medical problem in the elderly. Different kinds of absorbent products, such as diapers, pad and pant combinations, are used in incontinence care. In some cases, indwelling catheters, external condom catheters or in-and-out catheterisation are options for managing bladder dysfunction.

About 23% of the residents in nursing homes don't need toilet assistance. That means that the majority of residents is dependent on help from nursing staff for toileting and help to change soiled absorbent pads. Transmission of bacteria during incontinence care is associated with UTIs in elderly. In the vulnerable nursing home population, UTIs are a frequent problem and can lead to increased morbidity and even mortality. The prevalence of UTIs in nursing home residents is approximately 30%. Improving hand hygiene among staffing in nursing homes is one of the most important and effective methods to reduce hand born transmission of pathological microbes. Studies in long-term-care facilities document a lack of hand hygiene in connection to staff-resident interactions.

This study studies the association between the use of absorbent pads and symptomatic UTIs in the nursing home population.

Study design, materials and methods

A multicentre, prospective, 1-year surveillance among one hundred and sixty residents of nursing homes was performed. Patients were aged 65 and older. Patients that used antibiotics at baseline, or patients that used indwelling catheters, were excluded from the analysis.

Data on gender, age, ADL, comorbidity, urinary incontinence and mortality were collected. Fluid intake and the number of absorbent pads used during 48 hours were registered for each patient. Nurses were instructed to follow normal routines for shifting of pads in each patient in the two days the registration took place. Urinary tract infections were registered during one year of follow up.

During the 360 days of follow up, urine was collected when a UTI was suspected. UTI was diagnosed when patients had two or more symptoms and a urine culture with more than 10⁵ colony forming units (cfu) per mL of a single type of bacteria. The number of UTI's was recorded prospectively after 60, 180 and 360 days from baseline.

Analyses were performed using SPSS, version 15 (SPSS Inc. Chicago, IL).

Results

105 women and 48 men were included in the study. Mean age of the residents was 83 years ($\pm 8,2$). 118 (77%) residents were incontinent and used absorbent pads. The number of UTIs was significantly increased in residents that used absorbent pads (41% versus 13% in residents that did and did not use absorbent pads, respectively; $P=0.01$). Logistic regression analysis, using sex, ADL-score and use of absorbent pads as independent variables, showed a significant relation between sex and UTIs ($P=0.01$) and the use of absorbent pads and UTIs ($P=0.01$).

Interpretation of results

Our results show that a high number of nursing home residents are using absorbent pads due to urinary incontinence. This use is associated with a higher risk of developing UTIs. Whether this is caused by insufficient hand hygiene of nursing staff is unclear.

Concluding message

A significant correlation exists between use of absorbent pads and urinary tract infection in nursing home residents.

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<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	The Regional Ethics Review Board, Trøndelag, Norway
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes