EVIDENCE AGAINST THE EXISTENCE OF DISTINCT PATHOPHYSIOLOGICAL SYNDROMES OF VOIDING DYSFUNCTION IN THE ELDERLY

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INTRODUCTION

Detrusor hyper-reflexia and impaired contractility (D H I C) has been proposed as a distinct physiological subset identifiable amongst elderly people with lower urinary tract symptoms. Electron microscopic data has been published in support of this entity. The term "DHIC" is now being found in text books despite the absence of independent corroboration. Other published data on the elderly point to pathophysiological continua rather than distinct sub-groups. We re-tested this proposal using urodynamic studies.

METHODS

300 women aged 70+ and over with lower urinary tract symptoms but no other complicating illnesses were studied. Detrusor contractile function was assessed by measuring the total (IF) and maximum (Max F) isometric forces generated during unstable contractions. Isometric function was measured by calculating the detrusor shortening velocity (Q*) and the detrusor voiding power (WF). The relationship between these variables and the post-void residual volume (RV) were examined using non parametric ranked correlation, and comparisons between ordinal groups based on voiding efficiency.

RESULTS

The residual volume varied from 0 to 500ml with 56 patients showing residuals of 100ml or more. There was no relationship between residual volume and the quantities of isometric and isotonic function.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Median (CI)</th>
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<tr>
<td>IF</td>
<td>258 W (195-322 N)</td>
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<tr>
<td>MaxF</td>
<td>13 N (12-15 N)</td>
</tr>
<tr>
<td>Q*</td>
<td>15 ml/sec (14-18 ml/sec)</td>
</tr>
<tr>
<td>WF</td>
<td>17 W/m² (15-19 W/m²)</td>
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Range for correlation (Spearman R) = -0.2 - 0.008. The analysis based on ordinal grouping of the data was similarly undiscriminating.

CONCLUSION

These data contest the validity of the syndrome termed "DHIC" and suggest that voiding disorders in late life must be due to a complex interaction of many different factors which vary independently of each other.

FAILURE OF GUIDELINES FOR IMPROVING THE MANAGEMENT OF URINARY INCONTINENCE IN HOSPITAL

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Introduction

Because of the increasingly acute nature of the medical care of older people in hospital and the integration of geriatric and medical wards, the management of incontinence of urine (IU) may suffer. This study examines the effectiveness of guidelines for the management of IU (IUM) among older patients.

Methodology

A survey was carried out to assess the quality of IUM in patients discharged from geriatric wards. A IUM protocol was developed, implemented and audited 3 times over 22 months. It relied on identification of IU by nursing staff and recording by two stamped entries in the medical notes.

CONCLUSION

The guidelines were followed best when named nurses were responsible for monitoring use. Later failure was due to changes in nursing personnel.

THINNING OF THE GASTRIC MUCUS GEL LAYER IN H PYLORI POSITIVE SUBJECTS WITH ADVANCING AGE

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Introduction

The adherent mucus gel layer forms the initial protective layer in the stomach, changes in its thickness may predispose to peptic ulceration (PUD). PUD is more prevalent in older subjects, as is Helicobacter pylori (HP). We have examined the thickness of the mucus gel layer in relation to advancing age in those with and without HP infection.

Methods

Subjects had a normal stomach at endoscopy and were taking no NSAID or acid suppressive therapy. HP status was determined by serology and histology (HP+ve n=25 age range 34-87, HP-ve n=21 19-85). 4 gastric antral biopsies were snap frozen. Cryostat sections were processed and stained using the method of Jordan (Phys Soc, 1996). Measurements of mucous thickness were taken from each subject by one observer blind to age and HP status.

RESULTS

In HP+ve subjects there was no correlation between mucous thickness and age however in HP+ve subjects there was a significant thinning of the adherent mucus gel layer with advancing age (p=0.005, r=-0.543). This reduction remained when HP+ve subjects with underlying gastric atrophy were excluded (n=9)(p=0.01, r=-0.58). Mucus thickness measurements (mean(±)microns) were significantly thinner in HP+ve subjects over 70 years of age n=8 (78(9)) compared to those below 50 n=7 (101(26)) (p=0.02).

Conclusion

While no age related change occurred in HP-ve individuals, the presence of HP infection was associated with significant thinning of the mucus gel layer in relation to advancing age. Independent of the development of gastric atrophy. This decrease in mucus protection may predispose the HP infected 'geriatric' stomach to PUD.