LETTERS TO THE EDITOR

Sex differences in hypokalaemic and electrocardiographic effects of inhaled terbutaline

We were interested to read the paper by Dr ARA Rahman and coworkers (December 1992;47:1056–9) in which the authors reported gender related differences in the pharmacologically predictable side effects of the β agonist drug terbutaline. Greater degrees of hypokalaemia, ST segment depression, and QTc interval prolongation were observed in women than in men following single doses of inhaled terbutaline. The authors concluded that women were more sensitive to β agonist effects, and speculated on the relevance of this finding to the wider issue of the adverse effects of β agonists.

In the light of this report we have carried out three further analyses of data from our own study which compared the effects of regular administration of β agonist with “as needed” β agonist in the management of asthma.1 Overall control of asthma, baseline lung function, and changes in plasma potassium levels were analysed to identify any effect of gender on the results. Of the 64 evaluable patients 57 were better controlled during one or other of the two treatment periods; 17 when taking regular fenoterol and 40 when taking “as needed” bronchodilator (p < 0.005). In table 1 this result has been stratified for gender, and χ² testing shows that there were no significant differences between the sexes as far as overall asthma control was concerned. For the entire group (n = 64) the mean (SE) change in baseline FEV₁ during regular fenoterol treatment was −0·15 (0·06) litres compared with “as needed” treatment (MANOVA: SPSSX). The changes in lung function were more marked in men than in women but the difference was not significant (table 2).

The only variable which correlated with the decline in FEV₁ during the period of regular β agonist administration was that of inhaled terbutaline in our study. It is also worth mentioning that after eight weeks of treatment systemic tachyphylaxis would have occurred due to downregulation of extrapulmonary β₂ receptors which might conceivably have masked a small gender difference in response.

BJ LIPWORTH
Department of Clinical Pharmacology, Ninewells Hospital & Medical School, Dundee DD1 9SY

Inhalation trauma due to overheating in a microwave oven

I enjoyed the report by Drs AL Zanen and AP Rietveld (March 1993;48:300–2) on inhalation trauma due to overheating in a microwave oven. I disagree with the conclusion that pet birds should not be kept in the kitchen because of their high sensitivity to toxic gases. The selfless parakeets gave their owner a half hour warning of the danger to her lungs. As long as the risks of ornithosis and extrinsic allergic alveolitis are considered, the authors should encourage the placement of birds in the kitchen.

DSC ROSE
Department of Histopathology, The Whittington Hospital, London N19 5NF

Table 1: Numbers of subjects with better overall control of asthma stratified for treatment and gender

<table>
<thead>
<tr>
<th></th>
<th>Regular fenoterol</th>
<th>“As needed” fenoterol</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>7</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>Women</td>
<td>10</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>40</td>
<td>57</td>
</tr>
</tbody>
</table>

χ² = 0·04; p = 0·84.

Table 2: Mean (SE) changes in FEV₁ (litres) which occurred during first two months of treatment with regular β agonist (fenoterol)

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>ΔFEV₁ (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All subjects</td>
<td>64</td>
<td>−0·15 (0·06)</td>
</tr>
<tr>
<td>Men</td>
<td>28</td>
<td>−0·20 (0·07)*</td>
</tr>
<tr>
<td>Women</td>
<td>36</td>
<td>−0·12 (0·09)*</td>
</tr>
<tr>
<td>&gt;6 exacerbations</td>
<td>13</td>
<td>−0·40 (0·17)</td>
</tr>
<tr>
<td>≤5 exacerbations</td>
<td>51</td>
<td>−0·09 (0·07)**</td>
</tr>
</tbody>
</table>

*NS; **p < 0·05.

NOTICES

XII International Symposium of Respiratory Psychophysiology
The XIIth International Symposium on Respiratory Psychophysiology will take place on 20–22 September 1993 at the Wellcome Centre, London. For further details contact: Miss Janette Shiel, Department of Medicine, Charing Cross & Westminster Medical School, Fulham Palace Road, London W6 8RF. Tel: 081 846 7176, Fax: 081 846 7170.

Dr HM (Bill) Foreman Memorial Fund
The Trustees of the above Fund invite applications for grants relating to study in respiratory disease. Limited funds are available for registered medical practitioners to assist in travelling to countries other than their own to study respiratory disease, and also for support of clinical research abroad. For further details contact Dr Brian H Davies, Landough Hospital, Penarth, South Glamorgan CF6 1XX, UK.

Tuberculosis in the 90s
This conference will be held on 26 October 1993 at the Royal College of Nursing, London. Topics will include: The state of TB today; Immunotherapy; Immunology of TB; Tuberculosis: the global challenge. RCN members: £30.00, non-members: £45.00. Further details and an application form from Sandra Treadwell (071 409 3333 ext. 315).

Sex differences in hypokalaemic and electrocardiographic effects of inhaled terbutaline.
D R Taylor, G P Herbison and M R Sears

Thorax 1993 48: 776
doi: 10.1136/thx.48.7.776

Updated information and services can be found at: http://thorax.bmj.com/content/48/7/776.1.citation

These include:

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to: http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to: http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to: http://group.bmj.com/subscribe/