LETTER

Clinical outcomes of pandemic (H1N1) 2009 influenza (swine flu) in adults with cystic fibrosis

Patients with cystic fibrosis (CF) suffer recurrent bacterial pulmonary infections, but viral infections can also cause acute clinical deterioration.1 Certain patient groups suffer increased morbidity following pandemic (H1N1) 2009 influenza (swine flu),2 but there are few previous reports of outcomes in individuals with CF.3 4 The West Midlands, along with Greater London, has had the highest incidence of H1N1 influenza in the UK.5 We therefore examined the outcomes of patients diagnosed with H1N1 influenza at the West Midlands Adult CF Centre.

From June 2009 to April 2010 all adults with CF at our regional centre with potential H1N1 influenza had nasopharyngeal swabs tested by PCR. PCR testing was instituted in patients with fever >38°C together with one or more of the following: sore throat, rhinorrhea, loose bowel motions, myalgia and headache. We documented clinical management, as well as lung function and body mass index (BMI) at the visit prior to admission, as well as lung function and other viruses affecting cystic fibrosis. Among the 13 patients in the ‘H1N1 +ve’ group compared with the ‘H1N1 –ve’ group. All patients initially received antibiotics and oseltamivir, and in the ‘H1N1 +ve’ patients oseltamivir was continued for a median of 10 days. Nine of the 13 patients in the ‘H1N1 +ve’ group required hospital admission, but there were no differences in duration of hospital admission or requirement for antibiotics between the two groups. There were no statistically significant differences in clinical outcomes between the ‘H1N1 +ve’ and ‘H1N1 –ve’ groups. In both the ‘H1N1 +ve’ and ‘H1N1 –ve’ groups there was a non-significant decrease in FEV1 (forced expiratory volume in 1 s) % predicted, FVC (forced vital capacity) % predicted (table 1) and BMI. None of the patients in the ‘H1N1 +ve’ group had new changes on their chest radiograph or required ventilatory support.

In our experience, adults with CF have generally experienced a relatively mild illness as a result of the first influenza pandemic of the 21st century. However, the CF community is well aware of the potential implications of a subsequent more virulent pandemic in future years.

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REFERENCES


Table 1  Patient characteristics and lung function data

<table>
<thead>
<tr>
<th></th>
<th>Age, median (range)</th>
<th>Male, n (%)</th>
<th>Chronic Pseudomonas aeruginosa infection, n (%)</th>
<th>CF-related diabetes, n (%)</th>
<th>CF liver disease, n (%)</th>
<th>Transplant recipient, n (%)</th>
<th>FEV1 % predicted prior to presenting illness, mean±SD</th>
<th>FEV1 % predicted following presenting illness, mean±SD</th>
<th>FVC % predicted prior to presenting illness, mean±SD</th>
<th>FVC % predicted following presenting illness, mean±SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘H1N1 +ve’ group (n=13)</td>
<td>22 (17–48 years)</td>
<td>6 (46.2%)</td>
<td>13 (100%)</td>
<td>7 (53.8%)</td>
<td>6 (46.2%)</td>
<td>3 (23.1%)</td>
<td>51.4±18.3</td>
<td>46.5±16.7</td>
<td>67.4±17.9</td>
<td>64.0±19.9</td>
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<tr>
<td>‘H1N1 –ve’ group (n=32)</td>
<td>26 (15–59 years)</td>
<td>15 (46.9%)</td>
<td>31 (96.9%)</td>
<td>24 (75%)</td>
<td>6 (18.8%)</td>
<td>3 (9.4%)</td>
<td>50.7±20.9</td>
<td>49.8±19.5</td>
<td>66.4±23.4</td>
<td>65.0±20.9</td>
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</tbody>
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CF, cystic fibrosis; FEV1, forced expiratory volume in 1 s; FVC, forced vital capacity.