Q fever treated with erythromycin

In-vitro studies of the susceptibility of Coxiella burnetii to antibiotics suggest that only tetracycline and chloramphenicol are effective in Q fever. 1 Q-fever endocarditis has been treated successfully with tetracycline, however, and trimethoprim and sulphamethoxazole may be effective for chronic infections.4 Acute Q fever is usually self-limiting and often goes undiagnosed. Even when Q fever is a serious illness the diagnosis may be retrospective. Treatment is given for a non-specific, non-bacterial pneumonia. We report a case of severe Q fever that occurred during a local outbreak. Although the infection was initially misdiagnosed, the patient responded dramatically to intravenous erythromycin.

Case report

A 25-year-old insulation installer came to the emergency room complaining of anterior right-sided pleuritic chest pain, chills, and nausea. He had been in good health until two days before, when his symptoms began. He had no history of cough, foreign travel, or contact with anyone ill. He owned several dogs and a cat and kept poultry.

Examination showed an acutely ill man with temperature 37.5°C, pulse 84/min, and respiration 28/min and shallow. Pertinent findings were mild, diffuse abdominal tenderness without localising signs. His packed cell volume was 0.51 (51%); and white cell count 9.5 × 10⁹/l (9500/mm³) (80% segmented polymorphonuclear leucocytes, 7% band cells, 11% lymphocytes, 2% monocytes). Erythrocyte sedimentation rate was 48 mm in the first hour. A chest radiograph showed bilateral infiltrates in the right-middle and upper lobes.

The patient was admitted for observation, and immediately his temperature spiked to 40°C. We considered diagnosis of legionnaire's disease, mycoplasma pneumonia, psittacosis, and viral pneumonia. Because of his chest x-ray appearances, age, exposure history (work and home), and severe nausea, after routine specimens of sputum and urine were taken for culture he was given intravenous erythromycin lactobionate, 500 mg six-hourly. After 48 hours he was greatly improved; his temperature was 38°C, and his chest radiograph showed partial clearing. All the bacterial cultures were sterile. Meanwhile, his wife and three close friends were admitted to hospital with pneumonia. All improved dramatically after 48 hours of intravenous erythromycin. A serological diagnosis of Q fever was made retrospectively in all five patients. The most complete data were available for the index case (table).

Results of serological tests (expressed as reciprocal of dilution) on serum specimens (S1 and S2 collected three weeks apart) from index case of Q fever

<table>
<thead>
<tr>
<th>Test</th>
<th>S1</th>
<th>S2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complement fixation</td>
<td>128</td>
<td>128</td>
</tr>
<tr>
<td>Microagglutination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;4 6096</td>
<td>32</td>
<td>2048</td>
</tr>
<tr>
<td>Indirect immunofluorescence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IgM</td>
<td>32</td>
<td>64</td>
</tr>
<tr>
<td>IgG</td>
<td>&lt;8</td>
<td>64</td>
</tr>
<tr>
<td>Phase II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IgM</td>
<td>1024</td>
<td>2048</td>
</tr>
<tr>
<td>IgG</td>
<td>256</td>
<td>16384</td>
</tr>
</tbody>
</table>

Comment

The diagnosis of Q fever is more often missed in the United States (and reported as pneumonia) than in areas where the disease is more common. This probably results from recognising only the most serious cases. All our patients had pneumonia, high fever, and abdominal symptoms. We therefore assumed that their illnesses were more severe than usual and gave antibiotics.

The variable course of Q fever makes assessment of the effect of any antibiotic difficult. In all patients with Q fever, treated and untreated, fever usually lasts more than seven days. Treatment with penicillin does not reduce the duration of fever, and even appropriate antibiotics

References


(Accepted 22 June 1979)
Psychiatric disturbance and chronic haemodialysis

Despite extensive discussion of the psychiatric problems associated with dialysis, few systematic studies have been carried out and few data exist on the effects of hospital as opposed to home dialysis. I have examined the psychiatric symptoms of patients attending a renal unit that does not select patients on social or psychiatric criteria.

Patients, methods, and results

Patients attending the medical renal unit, Royal Infirmary of Edinburgh, were assessed on their first attendance after the start of the study. Eighty-five patients were assessed (mean age 43·5 (range 18·67) years), and six others were excluded (four for medical reasons, two because they could not follow instructions). The mean duration of dialysis was 3·03 years (range 2 months to 13·7 years).

The General Health Questionnaire (GHQ) and Middlesex Hospital Questionnaire (MHQ) provided objective and repeatable assessments. The GHQ gives an overall index of psychiatric disturbance, whereas the MHQ assesses anxiety, phobic anxiety, obsessionality, somatic anxiety, depression, and hysterical personality. Comparisons were made within the group for age, sex, and mode of treatment (home versus hospital dialysis), results obtained with both questionnaires were compared with normative data.

The mean GHQ score was 7·4 (SD 9·2), which is not significantly different from normative data obtained in consecutive attenders at a general practice surgery.1 The effects of age, sex, and mode of treatment were not significant. The recommended cutting score (11·12) was used to classify patients as "probable psychiatric cases" or "probable normals.

3 Freeman, R, and Hodson, M E, British Medical Journal, 1972, I, 419.

(accepted 1 June 1979)

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Distribution of probable psychiatric cases, and mean scores on General Hospital Questionnaire (GHQ) and Middlesex Hospital Questionnaire (MHQ) subscales according to sex and whether dialysis given at home or in hospital

<table>
<thead>
<tr>
<th></th>
<th>GHQ</th>
<th>MHQ subscales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No of</td>
<td>Anxiety</td>
</tr>
<tr>
<td></td>
<td>probable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>cases</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>10</td>
<td>46</td>
</tr>
<tr>
<td>Women</td>
<td>20 (NS)</td>
<td>8·8 (NS)</td>
</tr>
<tr>
<td>Hospital dialysis</td>
<td>5</td>
<td>29</td>
</tr>
<tr>
<td>Home dialysis</td>
<td>14</td>
<td>37 (NS)</td>
</tr>
<tr>
<td>Probable psychiatric</td>
<td>21·3**</td>
<td>3·3**</td>
</tr>
<tr>
<td>cases</td>
<td>2·6**</td>
<td></td>
</tr>
<tr>
<td>Probable normals</td>
<td>7·4</td>
<td>3·9</td>
</tr>
<tr>
<td>All patients</td>
<td>19</td>
<td>66</td>
</tr>
</tbody>
</table>

* Differences between means: P<0.05.
** Differences between means: P<0.01.
NS = Difference not significant.

**Comment**

The most interesting findings are that the prevalence of psychiatric symptomatology in patients receiving haemodialysis is similar to that in general-practice patients, and that dialysing patients at home rather than in hospital does not seem to affect psychiatric morbidity significantly, although such patients had slightly more depressive symptoms. The low prevalence of psychiatric disturbance found in this study differs from that reported by many investigators. Yet I studied a large sample of patients, included all patients who could be assessed (93·4%), and used standardised questionnaires. The reason for this discrepancy is not patient selection, since the studied unit rarely rejects patients and then only because of medical problems. Faced with a major problem such as dialysis, most patients respond well but are, perhaps, obscured by the few who react adversely. Finally, the unit studied is well-established and has several social workers and readily available psychiatrists, all of which may help to reduce psychiatric symptoms.

I am grateful to the patients and staff of the medical renal unit, Royal Infirmary of Edinburgh, for their co-operation; and to Dr R J Whinney for support and advice.

3 Goldberg, D P, Kay, C, and Thompson, L, Psychological Medicine, 1976, 6, 565.

(accepted 21 May 1979)

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