dairy farm workers, 24 of which had been collected from the Royal Show at Stoneleigh in 1983 and a further 270 locally in Herefordshire; the rest were part of a survey conducted in Derbyshire by the Health and Safety Executive. Of the 400 sera investigated 15 showed a positive result, indicating past infection. Hardjo anti-

bodies could be detected only at a low titre of 80 to 160. Of the 15 that were positive two were found in the Derbyshire survey and the 13 others in local Herefordshire volunteers. The overall prevalence of antibody in this group was about 4%. In a previous study undertaken in Worcestershire only one case of leptospirosis (icterohaemorrhagiae) was found in 800 sera tested by the microscopic agglutination test. Assuming the procedures used were similar this suggests that cattle associated leptospirosis is a fairly recent phenomenon and that there is a lack of general awareness of the condition in dairymen.

### Table III—Cases of Leptospira serogroup hebdomadis serovar hardjo in 1983

<table>
<thead>
<tr>
<th>Occupation</th>
<th>No</th>
<th>Occupation</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farming:</td>
<td></td>
<td>Others:</td>
<td></td>
</tr>
<tr>
<td>Arabic</td>
<td>0</td>
<td>Meat inspectors</td>
<td>1</td>
</tr>
<tr>
<td>Common</td>
<td>25</td>
<td>Butchers</td>
<td>1</td>
</tr>
<tr>
<td>Dairy</td>
<td>17</td>
<td>Veterinarians</td>
<td>2</td>
</tr>
<tr>
<td>Sheep</td>
<td>1</td>
<td>Miscellaneous</td>
<td>7</td>
</tr>
<tr>
<td>Beef</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Conclusion**

Leptospirosis is not a new disease in the British Isles, but the epidemiological pattern has changed. Today those most at risk from icterohaemorrhagiae infection are farmers and those who pursue water sports. The predominant infecting serogroup of leptospira has also changed, with *L. hebdomadis* serovar hardjo now more frequently reported than *L. icterohaemorrhagiae*. Recent studies of the incidence of cattle associated leptospirosis show that at least 4% of all dairymen are at risk, but on the whole such infections remain undetected.

**References**


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**Lesson of the Week**

### Acute respiratory insufficiency from psittacosis

**M VAN BERKEL, H DIK, J W M VAN DER MEER, J VERSTEEG**

**Introduction**

In man psittacosis varies from a mild influenza like illness to a feverish disease characterised by pneumonia and general symptoms.\(^1\)\(^2\) We describe four patients with acute respiratory insufficiency due to psittacosis, which led to the death of three of them.

**Patients**

Four patients were referred to our hospital because of respiratory insufficiency due to bilateral pneumonia, necessitating mechanical ventila-

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**Psittacosis should always be borne in mind as a possible cause of fulminating pneumonia with respiratory insufficiency**

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**University Hospital of Leiden, Leiden, Netherlands**

M VAN BERKEL, registrar in medicine

H DIK, senior registrar in medicine

J W M VAN DER MEER, md, senior registrar in medicine

Central Clinical Virological Laboratory, University of Leiden

J VERSTEEG, md, professor of virology

Correspondence to: Dr M van Berkel, Reanimation Centre, University Hospital, Rijnburgerweg 10, 2333 AA Leiden, The Netherlands.
treated with serum from non-immune rabbits. The immune adherence
haemagglutination test,1 carried out with a commercially available comple­
ment fixing antibody (Virion) gave low titres (table). IgM or IgG antibodies
were shown with an immunofluorescence assay performed on slides coated
with cells infected with C trachomatis (table). For the IgM test the sera were
pretreated to remove IgG and rheumatoid factor with anti-Fc and then
absorbed.4

Comment

An unusual feature of our patients with psittacosis was respiratory
insufficiency as the presenting symptom. Three of them died of
hypoxia, two despite treatment with a tetracycline. Respiratory
insufficiency has been described as a cause of death in review
articles but well documented case reports have not been published.

The pronounced leucocytosis found in our patients was also
unusual, since the number of leucocytes is normal or slightly
reduced in psittacosis. A relative bradycardia is often described, but
was not seen in any of our patients. In the fourth patient massive
haemoptysis was a major feature of his disease. Although the
frequency of haemoptysis in psittacosis has been estimated at
11%, we have not found a report of such a severe case.

Immunofluorescent study of lung tissue from case 4 with monospecific
antibodies against chlamydia showing suspicious inclusion bodies in a
pneumocyte.

In all cases the diagnosis was based on the presence of inclusion bodies in
pneumocytes that were positive for C psittaci antigen with the
immunofluorescence test. In our last patient sputum was also
tested with this technique and found positive for C psittaci antigen in
ciliated cells as well. IgM or IgG antibodies were shown in the sera of
all patients, and because of these findings we were able to initiate
specific treatment with tetracycline in cases 3 and 4.

These cases illustrate that in patients who present with respira­
tory insufficiency due to pneumonia the diagnosis of psittacosis
should be considered even if there has been no known contact with
birds. If possible, chlamydia antigens should be sought for in
spumum or biopsy specimens, and sera should be screened for IgM
and IgG antibodies. While the results of investigations are being
awaited antimicrobial treatment should include a tetracycline
preparation.

References

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4 Holker AC, Brand-Sartorius B, Vujcic, Mejers RC. Indirect immunofluorescence test for detection
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