LONG INCUBATION FOR RABIES

Recent case reports from the US and Sydney show that rabies may occasionally have a very long incubation period (2-19 years after exposure). Therefore, it may occur in immigrants from endemic areas such as South East Asia years after immigration and should be considered in the differential diagnosis of encephalitis in these patients.

Rabies is usually fatal (three known survivors had vaccine). There is no effective therapy and diagnosis is usually established postmortem. Antemortem diagnosis is important to prevent unnecessary investigations and treatment and also possible nosocomial transmission.

It is not generally known that the most rapid way to diagnose rabies antemortem is to examine a skin biopsy from the nape of the neck for rabies antigens by immunofluorescence and process saliva for virus isolation in neuroblastoma cells (or mice).

In the immunofluorescence test, a full-thickness, 0.5cm diameter skin biopsy is taken from just above the hairline, avoiding excessive infiltration of the specimen with local anaesthetic. It should be frozen at -70°C while awaiting transport for testing. Sensitivities and specifications of the saliva and skin tests are as follows.

<table>
<thead>
<tr>
<th>Virus isolation from saliva</th>
<th>Sensitivity</th>
<th>Specificity</th>
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<tbody>
<tr>
<td>(decreasing with duration of illness)</td>
<td>35-55%</td>
<td>100%</td>
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<tr>
<td>Rabies antigen in skin biopsy</td>
<td>50-94% (increase with duration)</td>
<td>100%</td>
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In patients who have not been immunised, serum antibody detection may also be useful in the second week after onset of symptoms. Brain biopsy from the cortex is not usually helpful.

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