Pertussis Identified Across Alaska

Updated Pertussis Treatment and Prophylaxis Guidelines

Since January 1, the Section of Epidemiology has identified 46 cases of pertussis, including 18 cases confirmed by polymerase chain reaction (PCR), from the following areas of the state: Kenai Peninsula (28), Anchorage (10), Wasilla (2), Delta Junction (4), Fairbanks (1), and Klawock (1). This compares with 11 cases for the same time period in 2004. Of the 46 cases, 23 (50%) were adults.

CLINICAL PRESENTATION

Pertussis is a highly communicable bacterial infection characterized by initial cold-like symptoms and a cough progressing to a paroxysmal cough, often with gagging or post-tussive vomiting. Infants and young children often develop an inspiratory whoop at the end of a cough paroxysm. Pertussis is transmitted person-to-person by direct or droplet contact with nasopharyngeal secretions of an infected person.

Pertussis is most severe when it occurs during the first year of life. With the recent recognition of pertussis activity in several areas of Alaska, it is critical for providers to make sure that their pediatric clients are up to date on vaccinations (DTaP).

PERTUSSIS IN ADULTS

Although generally considered a childhood disease, persons of any age can get pertussis. Immunity following the DTaP booster at age 4-5 years steadily wanes leaving virtually all adolescents and adults susceptible to pertussis. Symptoms vary in severity from mild, atypical respiratory illness to the classic pertussis symptoms.

The recommended dose in children is trimethoprim 8 mg/kg/day, sulfamethoxazole 40 mg/kg/day in two divided doses for 14 days. For adults, the preferred drug is azithromycin (7-day course) 10 mg/kg/day (maximum 500mg) in single dose on day 1 then 5mg/kg/day on Days 2 – 5.

RECOMMENDATIONS

1. Report all cases of pertussis to the Section of Epidemiology by calling 907-269-8000 or through the Rapid Telephonic Reporting system at 1-800-478-1700 (statewide) or 561-4234 (Anchorage).
2. Insure that children are age-appropriately immunized with a pertussis-containing vaccine (DTP/DTaP), starting at 2 months of age.
3. Consider the diagnosis of pertussis for all age groups, including adults, who present with a prolonged cough illness.
4. Prevent additional transmission using antibiotic prophylaxis of contacts to persons with pertussis. The macrolides listed below are now all considered first line drugs (Table 1). The Section of Epidemiology will assist in identifying contacts and arranging for prophylaxis.

REFERENCES


Table 1. Updated oral macrolide treatment and chemoprophylaxis for pertussis by age group

<table>
<thead>
<tr>
<th>Age group</th>
<th>Erythromycin (14-day course)</th>
<th>Clarithromycin (7-day course)</th>
<th>Azithromycin (5-day course)</th>
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<tbody>
<tr>
<td>≥6 months</td>
<td>40-50 mg/kg/day in 4 divided doses (maximum 2 gms/day) X 14 days.</td>
<td>15 mg/kg/day in 2 divided doses (maximum 500mg/dose) X 7 days.</td>
<td>10 mg/kg/day (maximum 500mg) in single dose on day 1 then 5mg/kg/day on Days 2 – 5.</td>
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<tr>
<td>1-5 months</td>
<td>As above (esotilate preparation preferred if available).</td>
<td>As above.</td>
<td>Preferred drug. 10mg/kg/day in single daily dose X 5 days.</td>
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<tr>
<td>&lt;1 month</td>
<td>As above (Use as alternate drug in doses above. Drug use is associated with elevated risk of IHPS). Not recommended (Safety data unavailable).</td>
<td>Preferred drug. 10mg/kg/day in single daily dose X 5 days.</td>
<td>Limited safety information.</td>
</tr>
</tbody>
</table>

TMP-SMZ may be used as an alternative agent in patients who are allergic to macrolides, who cannot tolerate macrolides, or who are infected, rarely, with a macrolide-resistant strain of Bordetella pertussis. The recommended dose in children is trimethoprim 8 mg/kg/day, sulfamethoxazole 40 mg/kg/day in two divided doses for 14 days. For adults, the recommended dose is trimethoprim 320 mg/day, sulfamethoxazole 1600 mg/day in two divided doses for 14 days. Because of the risk of kernicterus, TMP-SMZ should not be given to pregnant women, nursing mothers, premature neonates, or infants <2 months of age.

(Submitted by Ann Marie Bailey, RN, MS and Sue Anne Jenkerson, RNC, MSN, FNC, Section of Epidemiology.)