Macrolide resistant mycoplasma did not have worse clinical course in children’s hospital in Japan

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Background
Background: In 2000, macrolide resistant M. pneumoniae was reported among Japanese children. It was gradually increased up to 50% by 2012. Little is known regarding to its clinical entity in pediatric patients at children’s hospital.

Objective
To evaluate clinical characteristics of macrolide-resistant mycoplasma pneumonia in children.

Method
Design: Retrospective chart review
Patient: Children with mycoplasma pneumonia
Period: March 2011 to March 2014
Location: Tokyo Metropolitan Children’s Medical Center
Definition: Presence of chest X ray infiltration and detection of M. pneumoniae gene by a loop-mediated isothermal amplification assay in throat swab or sputum.

Macrolide resistance: 23s ribosome mutation by PCR at National Center for Children’s Health and Development.
Charts were reviewed and compared for clinical characteristics between macrolide susceptible(MS) and resistant(MR) group.

Result

<table>
<thead>
<tr>
<th></th>
<th>MR</th>
<th>MS</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (months)</td>
<td>100.5</td>
<td>85.7</td>
<td>p=0.390</td>
</tr>
<tr>
<td>Fever duration (days)</td>
<td>8.9</td>
<td>4.5</td>
<td>p=0.004</td>
</tr>
<tr>
<td>Hospital stay (days)</td>
<td>7.0</td>
<td>7.1</td>
<td>p=0.943</td>
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<tr>
<td>Oxygen demand (days)</td>
<td>6.8</td>
<td>7.0</td>
<td>p=0.806</td>
</tr>
</tbody>
</table>

Discussion
The total febrile days were significantly greater in MR patients than in MS patients in our study as in previous report. However, interestingly, length of hospital stay and duration required oxygen demand did not differ in two groups. It may be due to its nature of self-resolving disease of mycoplasma and they may not have severe clinical course regardless of macrolide susceptibility. Although MR mycoplasma was found in majority of patients (83.3%) in our study, it might be selection bias of referral hospital to have more cases of MR mycoplasma. Prolonged fever had a higher positive predict value for MR mycoplasma than higher CRP or LDH.

Conclusion
MR mycoplasma did not cause worse clinical course in hospitalized children, but only prolonged fever.

References

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