A traditional panacea for pneumonia and pneumonites

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The communication provides an investigative report of a synergistic formulation consisting of *Leucas aspera* Spreng plant root and *Periplaneta americana* Burm. an insect being used to prevent and cure pneumonia and pneumonites in children. The paper embodies detailed methodology, doses and administration, observations, discussion and conclusion on the various aspects of traditional formulation and future perspectives.

**Keywords:** *Leucas aspera*, *Periplaneta americana*, Pneumonia, Ethnomedicine, Traditional panacea

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Traditional medicine in India had a glorious past and has a promising future. But now a days these formulations based on age old experiments on human beings are facing a very tough competition with the modern, synthetic allopathic medicines, which aim not the treatment but management of ailments at large. However, on the other hand indigenous formulations containing local herbs, animals, their parts or products and mineral matters of natural origin are very well adapted to that particular locality and people living neighborly and endowed with miraculous healing power. The knowledge of these medicines passes onto the generation usually through oral teachings thereby restricted to a particular family, tribe, or section of society, which has led them to the verge of extinction. But, now a days ethnobiologists have taken a positive step to bring them at the frontier of science and technology. The communication embodies a detailed prescription about a synergistic traditional formulation useful for the treatment and prophylaxis of pneumonia and pneumonites, being practiced in Pratapgarh district of Uttar Pradesh. The formulation includes water extract of a plant root *Leucas aspera* Spreng (Lamiaceae) and an insect *Periplaneta americana* Burm. (cockroach). The literature survey reveals novelty of the medicine1-11. The paper covers detailed method of medicine preparation, doses, observations, discussions and conclusion.

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**Methodology**

About 50 gm of shade dried powdered roots of *Leucas aspera* put into 250 ml boiled and cooled water were left overnight (about 12 hrs). In the next morning, decanted solution is filtered and stored in a clean, sterilized dry bottle. Four average sizes *Periplaneta americana* are roasted over open flame till the appendages and wings are completely burnt and their body shrink and turn to reddish brown, then they are thoroughly shaken in 100 ml of boiled and cooled water till it turns to milky. After an hour, the decanted solution is filtered and stored in a clean, sterilized dry bottle. About 15 ml (3 teaspoonful) decanted solution of *Periplaneta americana* and about 5 ml (1 teaspoonful) decanted solution of *Leucas aspera* root (3:1 ratio) are mixed and shaken well to prepare one dose of medicine for an average child of 2-4 yrs old. According to the age and body weight, 15-25 ml preparation is given orally on alternate days. Based on severity and duration of the disease, 3-6 doses are required to exert the full remedial effect.

**Results and discussion**

Curative (Table 1) and prophylactic (Table 2) observations have been tabulated from the pneumonia, which underwent treatment through the preparation during 10 January 2001 to 13 August 2004. Pneumonia is a term to denote clinical illness characterized by inflammation of the distal lung, terminal airways, alveolar space and interstitium in a
variety of clinical situation such as viral broncopneumonia, aspiration pneumonia, chronic interstitial pneumonia and acute bacterial pneumonia etc. Bacterial pneumonia can be defined as a condition that results when host defense mechanism is insufficient to meet a bacterial challenge presented to the lung. *Streptococcus pneumoniae* is the most common cause of respiratory tract infection such as acute otitis media, sinusitis and pneumonia. Pneumonia caused by *S. pneumoniae* is a concern throughout both developed and developing world. It has been estimated that 1 million deaths per annum are attributed to *S. pneumoniae* in the developing world. Groups particularly at risk for pneumococcal diseases include children younger than 2 yrs of age, the elderly, the immuno-compromised and certain ethnic groups. Older age is a well known factor for pneumococcal pneumonia. The case fatality rate increased to approximately 40% in those aged 85 yrs or more.

The herbal ingredient of the formulation, *Leucas aspera* is used as antipyretic, juice of leaves applied externally in psoriasis, chronic skin eruptions and painful swellings (Fig. 1). Flowers given with honey for cough and cold. Plant extract shows antibacterial activity against *Micrococcus pyogenes* and *Escherichia coli*. The animal constituent of the formulation, *Periplaneta americana* is nocturnal, cursorial, omnivorous insect which prefers warm damp places (Fig. 2). *Periplaneta americana* is used extensively in homeopathic systems to prepare remedy for scitis, various forms of dropsy, jaundice, and urethritis, etc. However, there is no such report of use of the insect to treat pneumonia and pneumonites.

**Conclusion**

The investigative studies and literature survey reveal that the synergistic formulation based on plant and animal ingredients are highly effective in the treatment and prophylaxis of pneumonia and associated clinical situations among children. Since,

<table>
<thead>
<tr>
<th>Age of patients</th>
<th>No of patients treated</th>
<th>Cured</th>
<th>Not cured</th>
<th>Efficiency in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 yr</td>
<td>17</td>
<td>16</td>
<td>01</td>
<td>94.10</td>
</tr>
<tr>
<td>B/w 1-2 yrs</td>
<td>40</td>
<td>36</td>
<td>04</td>
<td>90.00</td>
</tr>
<tr>
<td>B/w 2-3 yrs</td>
<td>41</td>
<td>39</td>
<td>02</td>
<td>95.12</td>
</tr>
<tr>
<td>B/w 3-4 yrs</td>
<td>46</td>
<td>43</td>
<td>03</td>
<td>93.47</td>
</tr>
<tr>
<td>B/w 4-5 yrs</td>
<td>27</td>
<td>25</td>
<td>02</td>
<td>92.30</td>
</tr>
<tr>
<td>B/w 5-6 yrs</td>
<td>13</td>
<td>12</td>
<td>01</td>
<td>92.93%</td>
</tr>
<tr>
<td></td>
<td>184</td>
<td>171</td>
<td>13</td>
<td>92.93%</td>
</tr>
</tbody>
</table>

**Table 2—Prophylactic activity**

<table>
<thead>
<tr>
<th>Age of patients</th>
<th>No. of patients</th>
<th>No recurrence</th>
<th>Recurrence</th>
<th>Efficiency in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>05</td>
<td>05</td>
<td>Nil</td>
<td>100.0</td>
</tr>
<tr>
<td>B/w 1-2 yrs</td>
<td>09</td>
<td>08</td>
<td>01</td>
<td>88.8</td>
</tr>
<tr>
<td>B/w 2-3 yrs</td>
<td>06</td>
<td>05</td>
<td>01</td>
<td>83.3</td>
</tr>
<tr>
<td>B/w 3-4 yrs</td>
<td>10</td>
<td>08</td>
<td>02</td>
<td>80.0</td>
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<tr>
<td>B/w 4-5 yrs</td>
<td>07</td>
<td>05</td>
<td>02</td>
<td>71.4</td>
</tr>
<tr>
<td>B/w 5-6 yrs</td>
<td>06</td>
<td>02</td>
<td>04</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>43</td>
<td>33</td>
<td>10</td>
<td>76.7%</td>
</tr>
</tbody>
</table>

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Fig. 1—*Leucas aspera*

Fig. 2—*Periplaneta americana*
the product is traditional and has a long history of trial on human beings without any adverse effect; therefore, it can be popularized among the people of developing countries to save the life of millions of children dying every year due to pneumonia and pneumonites. However, the scientific scrutiny of the formulation in the light of biochemistry, microbiology, pharmacology and toxicology, it can yield a safe indigenous, cost effective, curative medicine and an effective vaccine in future at commercial scale.

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