

# **Predisposing factors associated with *Mycoplasma pneumoniae* respiratory tract infections**

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## **ABSTRACT**

### **Introduction**

Lower respiratory tract infections account for ~10% of worldwide burden of morbidity and mortality. Pneumonia is the 9<sup>th</sup> leading cause of hospital mortality in Sri Lanka and atypical pathogens account for 1/5<sup>th</sup> of the cases. *M. pneumoniae* is the predominant (50%) atypical pathogen. Knowing predisposing factors strengthen the modes of prevention.

### **Objective**

Determination of predisposing-factors associated with *M. pneumoniae* respiratory infections in Sri Lanka.

### **Methodology**

A prospective clinical study was done involving 416 adult-patients in Colombo-North Teaching-Hospital, Ragama and chest-hospital, Welisara (Pneumonia-97, acute-bronchitis-182, pharyngitis-137). *M. pneumoniae* specific IgG and IgM were tested in paired-sera using commercial-ELISA. Patient-interviewed-questionnaire was used to obtain data on predisposing factors and evaluated in serologically-positive and serologically-negative groups. The level of significance was considered as  $p < 0.05$ .

### **Results**

There was no significant difference observed in relation to age (p-value-0.28, 0.76 and 0.2 in pneumonia, bronchitis, pharyngitis respectively), gender, number of individuals/room (sleeping area) (p=0.82), having respiratory tract infections in close contacts (p=0.15), malignancies or past history of asthma (p>0.05 in both groups) with *M. pneumoniae* infection. However, there was significant association between *M. pneumoniae* pneumonia and diabetes mellitus (p<0.05).

### **Discussion**

There was no specific age group detected to have *M. pneumoniae* infections which predominantly occur in childhood or significant gender predominance seen as with previous studies. The present study was not carried out in a setting with closed population to have significant infection amongst closed contacts. The significant association between *M.pneumoniae* infection and having diabetes mellitus would need further studies.

### **Conclusion**

There were no identifiable strong factors predisposing to *M. pneumoniae* infection except diabetes mellitus.