ASSOCIATION OF MYCOPLASMA PNEUMONIAE WITH RESPIRATORY TRACT INFECTIONS IN CHILDREN

OSAMA M. S. ABDUL-WAHAB, AHMED MOSSA AL-HAKAMI, AYED A.M. SHATI, ALI M.A. ALSUHEEL, ASHISH KUMAR, FATEHA Benahmad

1 DEPARTMENT OF MICROBIOLOGY, FACULTY OF MEDICINE, KING KHALID UNIVERSITY; 2 DEPARTMENT OF CHILD HEALTH, FACULTY OF MEDICINE, KING KHALID UNIVERSITY; 3 DEPARTMENT OF SEROLOGY, ASSER CENTRAL HOSPITAL, ABHA, KINGDOM OF SAUDI ARABIA

INTRODUCTION

*Mycoplasma pneumoniae* is one of four most common species of organisms that are responsible for most clinically significant infections in humans. It is a frequent cause of acute respiratory infections in both children and adults. The organism can cause pharyngitis, otitis, tracheobronchitis, or community-acquired pneumonia, but patients may also remain totally asymptomatic. Aim of this prospective study for children, was to investigate the association of *M. pneumoniae* with respiratory tract infections in a Saudi population.

MATERIAL AND METHODS

This work was designed as a case-control study in which 90 patients (Mean age of the patients in case group was 5.94±2.73 and in control group was 6.51±2.26) of either sexes were included. These patients were classified into two groups: first group (case group), included 45 patients who had been admitted in hospital with diagnosis of respiratory tract infections and the second group (control group), included 45 healthy patients who had no history of respiratory tract infections. Both the groups were age and sex matched. Presence of IgM antibodies to *Mycoplasma pneumoniae* was assessed by ELISA technique in both groups.

RESULTS

In the case group, 4 (9%) cases out of 45 children were positive for anti-mycoplasma antibody whereas in the control group, all children were negative. All positive case group patients had symptoms of acute broncho-pneumonia. 18 (40%) of the patients were diagnosed with bronchial asthma (40%) inclusive of all the four cases diagnosed with *Mycoplasma pneumoniae* infection. The relative risk for the occurrence of mycoplasma infection was estimated to be 9 (95% CI = 0.49 -162.43). However, on comparing the case and control groups, the result was not found to be statistically significant. (Fischer Exact Test p=0.0583).

CONCLUSION

Children in Saudi Arabia are at a relatively higher risk of developing *Mycoplasma pneumoniae* infection especially those predisposed with underlying chronic respiratory illnesses such as asthma. This is a first study of its kind from the region reporting such a disease in children using a serological assay as ELISA. Further studies are required to evaluate the risk of coinfection by *Mycoplasma pneumoniae*, *Streptococcus pneumoniae* and *Chlamydia pneumoniae*. Evaluating and establishing a correlation between *Mycoplasma pneumoniae* and the onset of asthma among infected children can be a prospective field of study.