Abstract: Background and Objectives: Mycoplasma pneumoniae causes various respiratory diseases. Primary atypical pneumonia, pharyngitis and tracheobronchitis are the main diseases. Mycoplasmal infection may be asymptomatic, or may produce upper respiratory tract disease, or atypical pneumonia. The pneumonia is difficult to differentiate from viral diseases by clinical means alone. Laboratory tests such as isolation, PCR and ELISA are helpful as aids in the diagnosis of Mycoplasma pneumoniae infection. This prospective study describes the seroprevalence of Mycoplasma pneumoniae Serum Antibodies, IgG and IgM, at Tabriz University of Medical Sciences Hospitals.

Methods: From May 2009 to November 2009, 200 patients with respiratory tract infections, 50.3 % male, 49.7% female, median age 25 years, range 3 month to 81 years, were enrolled for the study. Fifty –one patients were excluded because antibiotic use. Single blood sample was collected according to standard laboratory methods for ELISA testing. Commercially available ELISA kit was used for quantitative and semi quantitative determination of antibody titers (IgG and also IgM) according to the instructions of the manufacture.

Results: the seroprevalence of IgG was 53% (79 of 149), and IgM anti Mycoplasma was detected in 8 (5.3%) patients.

Conclusion: Positive IgM results are consistent with acute infection. A single positive IgG result only indicates previous immunologic exposure and Negative results indicate no detectable level of IgG antibodies to Mycoplasma pneumoniae and does not exclude primary infection. The current study showed that M. pneumoniae is one of common respiratory infections in this area. Serological methods are more extensive used because they are easy to perform and more affordable.