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Original Report

What Is the Role of Chlamydia pneumonia in Rhinosinusitis of Children?

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Abstract:

Chlamydia pneumoniae is a common respiratory pathogen which is often found in our paediatric populations. Many patients with community-acquired pneumonia caused by C. pneumoniae have symptoms suggestive of sinusitis. The role of C. pneumoniae in rhinosinusitis in children (Mean age = 4.3 ± 2.5 year). This case control study was done in the pediatric and ENT clinics of Hazrat Rasul Hospital in Tehran (2004-2005). This study based on diagnostic parameters for rhinosinusitis cases and controls. Serum specific antibodies (IgG & IgM) against Chlamydia pneumoniae detected in 51 cases and 31 controls. Nasopharyngeal swabs for detection of Chlamydia p-DNA by PCR used in all cases and controls. Acute infection (IgM) obtained in 11% (6/51); previous immunity (IgG) in none (0/51) of rhinosinusitis cases. Acute infection (IgM) detected in 6.5% (2/31); previous immunity (IgG) in 13.3% (4/31) of controls and dependent to age (P=0.00). Acute infection (IgM) had no significant difference (P= 0.7) between cases and controls but previous infection (IgG) was significantly higher in controls (0.007). Active infection (DNA-PCR) not obtained in cases. Acute infection (IgM) in cases was twice higher than controls. None of cases had previous immunity to chlamydial infection (IgG). It was significantly lower than healthy controls (P = 0.01). These serological results had different results in comparison with its role in pneumonia study but it was closer to adenoid study (16%). Adenoid may act as a reservoir for bacteria causing sinusitis, lung and chronic ear infection. We recommend specific antibiotics for C. pneumoniae in resistant sinusitis to usual drugs especially in cases according to adenoiditis and adenoid hypertrophy before surgery.

Keywords:

Rhinosinusitis , ELISA test , PCR (polymerase chain reaction) , Chlamydia pneumoniae

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