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Paper Poster Session

Epidemiology of brain infections

The seroprevalence of *Mycoplasma pneumoniae* IgG and IgM antibodies in patients with ischaemic stroke

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Background: Association between mycoplasma pneumoniae infection and increased risk for brain stroke has been well understood. Hence, the value of serologic tests for assessing causative relationship between this infection and brain stroke seems to be high. The present study aimed to determine serum level of anti-mycoplasma pneumoniae antibodies in patients with brain stroke and to compare it with non-stroke patients.

Methods: This cross-sectional study was performed on 97 consecutive ischemic stroke patients and 97 sex and age-matched non-stroke patients. Quantitative enzyme-linked immunosorbent assay (ELISA) was established to measure the levels of anti-mycoplasma pneumoniae IgG and IgM Antibodies.

Results: Regarding the level of anti-Mycoplasma pneumoniae IgM, the titer of this marker was positive in 4.1% of patients with ischemic stroke, while none of the subjects in control group had positive titer for this antibody (OR = 1.043, 95%CI: 1.001 – 1.087, p = 0.043). The rate of positivity for anti-Mycoplasma pneumoniae IgG in ischemic stroke patients was significantly higher than in the control group (28.5% versus 13.4%, p = 0.031). Odds ratio for exposure to Mycoplasma pneumoniae was 2.24 times of the control subjects. The level of anti-Mycoplasma pneumoniae IgM was independent to both sex and age variables in patients group (p = 0.77). The level of anti-Mycoplasma pneumoniae IgG did not depend to subjects' gender in control group, but was significantly higher in men compared with women in patients group.

Conclusions: A high level of anti-Mycoplasma pneumoniae IgM and IgG antibodies indicate a significant association of mycoplasma pneumoniae infection and history of this infection with increased risk for ischemic stroke.