

Cytomegalovirus IgG Seropositivity in the Adult Population of Korea : a Cross-Sectional Study

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Background

- Cytomegalovirus (CMV) is a prevalent viral infection worldwide.
- Although South Korea has historically shown a high CMV IgG seropositivity rate (> 95%), recent declines have been reported.
- This study aimed to assess the current CMV IgG seropositivity rate and analyze current trends in the Korean population.

Methods

- Residual samples from individuals undergoing regular health checkups were analyzed.
- CMV IgG levels were measured at two institutions using a commercial immunoassay (Alinity i CMV IgG Reagent Kit, Abbott), following the manufacturer's instructions.
- Results were interpreted as “Reactive” when the concentration of CMV IgG was ≥ 6.0 arbitrary units (AU)/mL, and “Nonreactive” when CMV IgG was < 6.0 AU/mL.
- Seropositivity was compared by sex and across age groups (20–29, 30–39, 40–49, and 50–59 years).

Results

- A total of 1,978 samples (937 men and 1,041 women) were analyzed, with a relatively balanced distribution across age groups.
- Overall CMV IgG seropositivity was 89.9% (1,778/1,978), which was significantly higher in males (91.7%, 859/937) than in females (88.3%, 919/1,041) (difference 3.4%, 95% confidence interval 0.8%–6.0%,  $P = 0.012$ , Chi-square test).
- No significant gender difference was observed within individual age groups.
- Seropositivity increased with age, from 76.3% (347/455, 20–29 age group) to 99.8% (448/449, 50–59 age group) ( $P$  for trend < 0.001), consistent in both genders (Figure 1).
- Median CMV IgG concentrations also increased significantly with age in both males and females (Figure 2).

Figure 1. Seropositivity of CMV IgG in Korean general population by gender and age groups

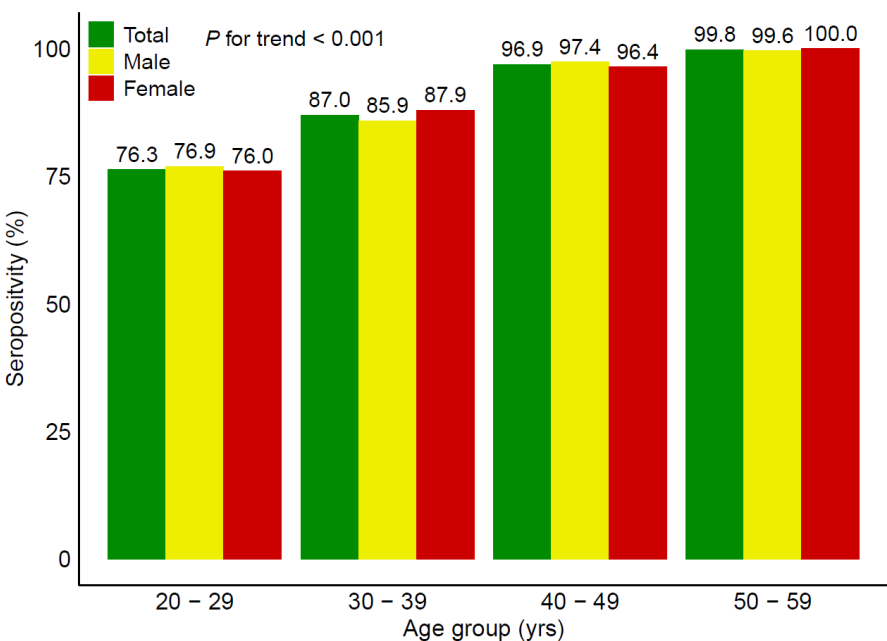
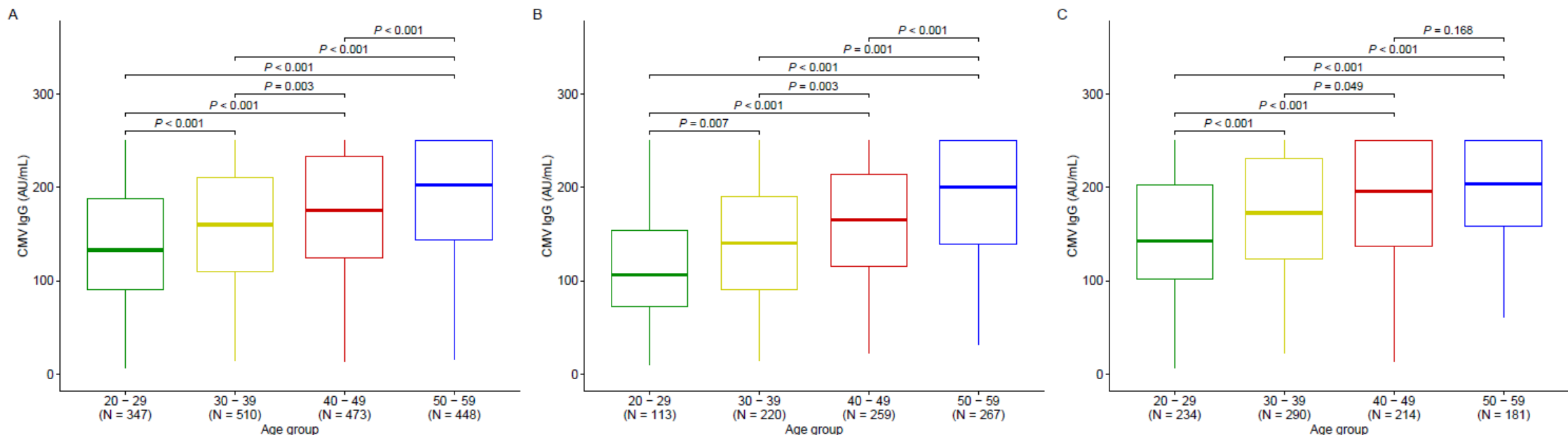


Figure 2. CMV IgG concentration of each age groups within seropositive individuals. (A) Total (n=1,778) (B) Male (n=859) (C) Female (n=919)



Conclusion

- CMV IgG seropositivity in the general Korean population was 89.9, with a higher rate in males.
- Due to lower seropositivity in younger adults, continued monitoring and further education are essential for CMV control and prevention.