

Gender and Age Trends of the Coxsackievirus: A Retrospective Study of a Pediatric Practice

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ABSTRACT

The coxsackievirus is known to cause diseases with neurological complications and fatalities in the most severe cases. Globally, the incidence of coxsackievirus infections shows a male preference with a 60:40 male to female ratio of occurrence. Additionally, age has been shown to be a significant risk factor for incidence of disease with prevalence being higher among younger patients. The worldwide increase in the incidence of coxsackievirus infections has created a need to characterize the prevalence of occurrence in the U.S. **Purpose:** The purpose of this study was to analyze the trends of occurrence of coxsackievirus infection in a specific pediatric practice in the U.S. and to compare them to known global trends. **Methods:** A clinical report from Phoenix Pediatrics, Ltd., including 130 cases of coxsackievirus over a two-year span, was analyzed. A chi-square analysis was performed to compare the gender ratio of the sample to that of the global 60:40 male to female ratio of occurrence. Additional chi-square analyses were performed to determine if the incidence of infections occurred equally across age groups. **Results:** The chi-square analysis across genders suggested that the sample came from a population that did not differ from the global ratio of 60:40 male to female incidence of occurrence ($X^2_{(1, n = 130)} = 0.03, p = 0.858$). Further chi-square analyses showed that the incidence in the sample did not occur evenly across age groups ($X^2_{(2, n = 37)} = 16.60, p < 0.001$) and frequency of infection within the 0-4 years age group was significantly higher than expected ($X^2_{(1, n = 130)} = 24.12, p < 0.001$). **Conclusion:** Within this pediatric practice, the incidence of occurrence of coxsackievirus infection was found to be consistent with the 60:40 male to female ratio commonly observed worldwide. It was also determined that there was not an equal incidence across different age groups and that patients between the ages of zero to four years were more likely to contract the coxsackievirus than older patients.