Journal of Clinical Virology 53 (2012) 370–371

Contents lists available at SciVerse ScienceDirect

Journal of Clinical Virology

journal homepage: www.elsevier.com/locate/jcv

Letter to the Editor

Lack of seasonality of primary human cytomegalovirus infection in pregnancy

Human cytomegalovirus (HCMV) is an opportunistic pathogen belonging to the *herpesviridae* family and, like all herpesviruses, undergoes latency and reactivation in its human host. HCMV has developed very efficient ways for infecting human beings and horizontal transmission occurs very efficiently through contacts with infected bodily fluids, such as saliva, blood, urine and genital secretions.[1] In immunocompetent individuals, primary infection is generally asymptomatic, or, when symptoms are present, they are nonspecific, like asthenia, low grade fever, headache or upper respiratory symptoms.[2]

It is generally assumed that primary HCMV infections occur during the whole year with no seasonal variations.[1] However, to our knowledge, this has not been formally proven,[3] given that HCMV infection is not a reportable disease and the objective difficulty in diagnosing and dating primary infection in the general population. On the other hand, diagnosis and dating of primary HCMV infection is needed in pregnant women for counselling/management purposes.[2] In fact, primary HCMV infection during pregnancy results in fetal infection in about 40% cases. However, the actual rate of vertical transmission as well as of fetal disease depends on time of gestation at maternal infection.[4–6] Similarly, planning of prenatal procedures requires onset of infection to be established.[7] By taking advantage of the population of pregnant women with well known onset of primary infection attending our institution over the years,[4] we retrospectively investigated whether a seasonal pattern for primary HCMV infection could be identified.

Data from 731 pregnant women referred to our institution from January 2007 to December 2010 for confirmation of a suspected primary HCMV infection were reviewed. Diagnosis of primary HCMV infection was based on one or more of the following criteria: IgG seroconversion (i.e. *de novo* appearance of specific antibodies in

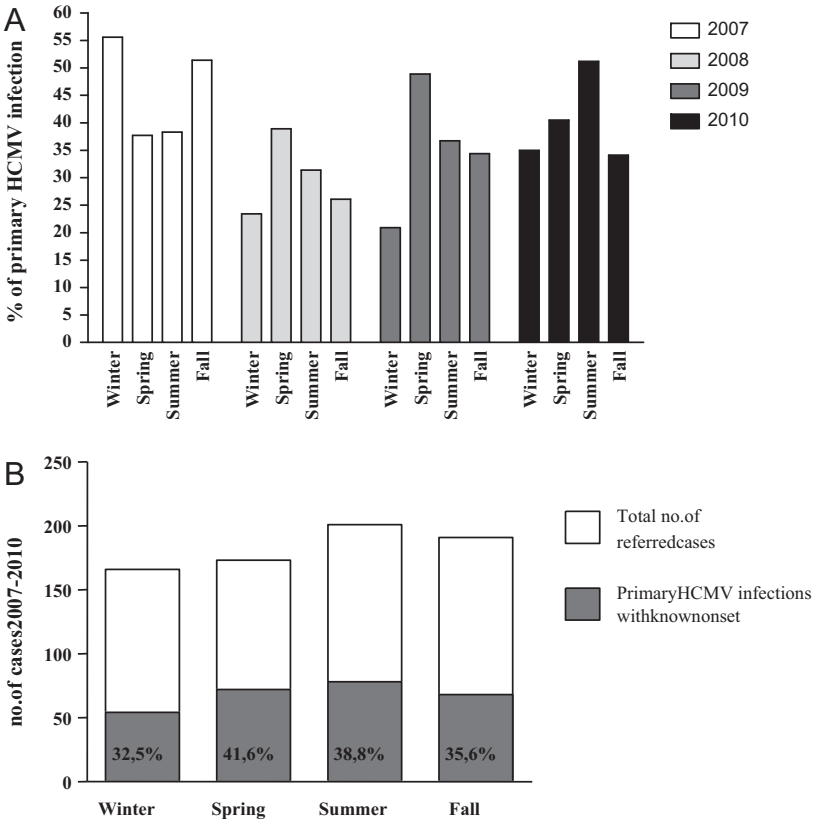

Fig. 1. Seasonal distribution of pregnant women with primary HCMV infection in each of the four years examined (A). No significant difference was observed in the percentage of women with primary infection diagnosed in different seasons over the 4-year period with respect to the number of women referred during the same period because of a suspected primary infection (B).

1386-6532/$ – see front matter
doi:10.1016/j.jcv.2011.12.032

a previously seronegative individual), kinetics of HCMV-specific IgM and IgG antibody, low IgG avidity index, and detection of HCMV or its products in blood. Dating of infection was based on antibody kinetics as well non-specific symptoms (headache, fever, asthenia and upper respiratory symptoms), and/or biochemical/haematological alterations (liver enzymes, lymphocyte counts).[2]

Onset of primary infection was available for 272 (93 primiparous, 33.8%) of 330 (83.3%) women with confirmed diagnosis. In particular, during the 4-year period month of onset could be established for 77 women in 2007, 53 in 2008, 76 in 2009, and 66 in 2010.

Seasonal distributions of HCMV infection in each of the 4 years examined and during the entire period are shown in Fig. 1A and B, respectively. Different seasonal peaks were observed from year to year. However, no significant difference was observed among seasons over the period examined (χ^2 test). In conclusion, no defined seasonal pattern for HCMV infection acquired in pregnancy could be identified.

Conflict of interest

The authors have no conflict of interest to declare.

Acknowledgements

Partially supported by Ministero della Salute, Fondazione Istituto di Ricovero e Cura a Carattere Scientifico Policlinico San Matteo, Ricerca Corrente grant 80513, and Fondazione Denegri, Torino, Italy.

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17 November 2011