# Epidemiology poster session 1: STI trends—HSV

## P1-S1.18 INVESTIGATING A CLUSTER OF NEONATAL HERPES AT A SINGLE INSTITUTION

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**Background** Neonatal herpes (NH) is a reportable disease in New York City (NYC); annual incidence is ~12/100 000 live births; rates are highest among young, and Black non-Hispanic women. Over a 6-month period at our institution, we identified four neonates with disseminated NH. We investigated the cluster to rule out a nosocomial cause.

**Methods** NH incidence was calculated for the institution and demographics of delivering mothers compared to NYC overall. NH cases were characterised with regard to viral type, birth history, syndrome classification, vital status, maternal serum antibody status, and herpes viral isolates were sought. We reviewed electronic medical records to identify staff common to >2 case-mothers or -infants. We interviewed staff about signs/ symptoms of herpes simplex virus (HSV) infection over the last year, or close contact with a family member with HSV. Maternal hospital rooms, infant isolettes, and ventilators were mapped to rule out common use by case-mothers or -infants. As NH cases were identified, protocols were implemented for notifying paediatrics of maternal post partum fever, and for initiating empiric treatment with IV acyclovir for neonates of febrile mothers.

**Results** The NH incidence rate at our institution (151/100 000 live births) was >10 times NYC incidence. Women delivering at our institution were younger (41% vs 27% NYC-wide aged <25), and more likely to be Black non-Hispanic (85% vs 22% NYC-wide). Details for case-infants are presented in Abstract P1-S1.18 table 1 below. Among three mothers to case-infants with type 2 HSV, two were antibody positive and one was negative, suggesting she may have had recent infection unapparent at delivery. Herpes viral isolates were retained for only 1 of 4 case-infants. The four case-mothers were delivered by four different obstetricians. Among 11 staff common to >1 case-infant, none had any history or symptoms of HSV infection; no equipment was common to the case-infants and no mothers shared a common room.

**Conclusions** NH surveillance data provided important context for this investigation; incidence at this institution was much greater than expected, but the patient population is at increased risk for NH. Available data do not support a nosocomial cause for this cluster; retention of neonatal herpes viral isolates would have aided this investigation. Early recognition of the cluster by the treating team and prompt involvement of national and state public health agencies helped guide the investigation and establish novel preventive and empirical treatment protocols.

## P1-S1.19 HERPES SIMPLEX VIRUS TYPE 2 INFECTION—SEROPREVALENCE IN SIBERIA

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**Background** Herpes simplex virus type 2 (HSV-2) is a common sexually transmitted infection worldwide, and its prevalence has increased significantly over the last 2 decades in many developed countries. The prevalence rates of HSV-2 infection differ between populations, however, HSV-2 seropositivity is uniformly higher in women than in men and increases with age.

**Objectives** Aim of the present study was to evaluate the seroprevalence of HSV-2 infection among various population groups in Siberia, Russia.

**Methods** A sample of 1014 persons aged 14–64 years (47% males) were randomly selected from the general population in urban Novosibirsk (predominantly Caucasians) and rural regions of Tyva and Altai Republic (predominantly persons of Asian origin). The study includes data obtained in 1994–2005. Sera were tested for IgG antibodies to HSV-2 infection with type-specific ELISA (VectoHSV-2 IgG, Vector-Best, Novosibirsk, Russia).

**Results** The overall prevalence of HSV-2 positivity was 21% being higher in females (26.4%) compared to males (17.0%, p=0.01). Seroprevalence rates increased with age from 0% at 14–17 years to 22.8% at 55–64 years in males and from 1.8% at 14–17 years to 31.6% at 55–64 years in females. Neither difference was observed between urban and rural population, nor in surveyed persons of Caucasian and Asian origin. Ten-year trend showed a decrease in the frequency of HSV-2 detection equally in different populations by 20%. In conclusion, HSV-2 is common in Russia with the prevalence rates close to USA and Scandinavian countries. The sex and age distribution of the infection in Russia is similar to other populations. In Siberia, ethnicity and standard of living do not influence HSV-2 prevalence.

## P1-S1.20 SEROPREVALENCE OF HERPES SIMPLEX VIRUS TYPE I AND II INFECTIONS IN RUSSIAN FEDERATION

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**Background** Herpes simplex virus type 2 (HSV-2) is a common sexually transmitted infection worldwide, and its prevalence has increased significantly over the last 2 decades in many developed countries. The prevalence rates of HSV-2 infection differ between populations; however, HSV-2 seropositivity is uniformly higher in women than in men and increases with age. However, HSV-1 has been recently identified as a genital infection.

Abstract P1-S1.18 Table 1

| | Month | HSV Type | Gest. Age (wks) | Delivery Type | Age at first sign (days) | Mat Age (yrs) | Mat hx of lesions | Post Partum fever | Mat HSV IgM | Mat HSV IgG | Outcome |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Case 1 | Apr | 1 | 36 | Vaginal | 4 | 18 | None | Yes | NA | NA | Expired |
| Case 2 | May | 2 | 39 | C Section | 4 | 19 | None | Yes | Pos | Neg | Survived |
| Case 3 | Jul | 2 | 39+ | Vaginal | 19 | 37 | None | No | Pos | Pos | Expired |
| Case 4 | Oct | 2 | 33 | Vaginal | 3 | 21 | None | Yes | Neg | Neg | Expired |

Gest, gestational; mat, maternal; hx, history.



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