

Comparison of herpes simplex prevalence in serum and semen-cervical sample of infertility patients: A systematic review and meta-analysis

Chia-Yu Chiu, Amara Sarwal, Peter Yangga, Addi Feinstein, Karen Hennessey
Lincoln Medical Center, Bronx, NY, USA



Introduction

Herpes simplex virus (HSV) is a common pathogen of sexually transmitted infections, however the role it plays in the development of infertility is unknown. Although it is well established that herpes virus affects fertility in male animal models, the question remains as to the effect of HSV in human infertility.

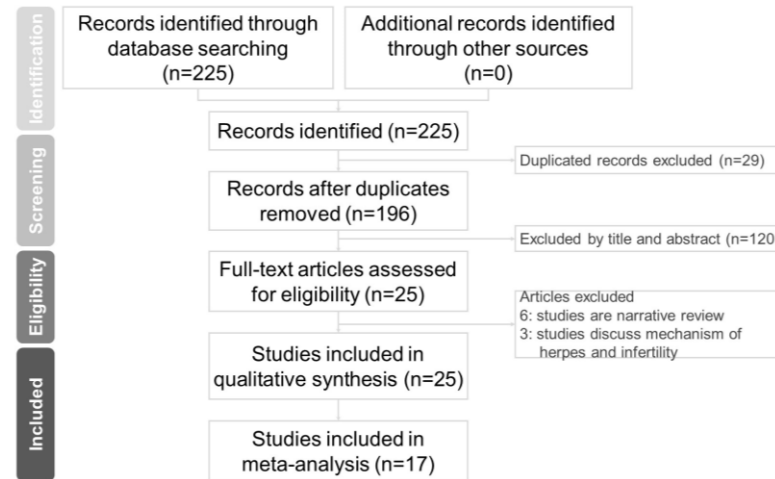
Routine testing of **serum HSV IgG/IgM/DNA or HSV PCR in semen-cervical sample** is not commonly done in clinical practice, and there are no set guidelines as when to screen.

Method

We searched PubMed, Embase, Cochrane Library, and ClinicalTrials.gov **from inception to December 2019**.

Result

17 retrospective studies were included in this review. In the male-infertility cohort, a total of 11 studies were compared. The random-effects pooled prevalence was 12.7% in semen sample, and 16.8% in serum sample. In the female-infertility cohort, a total of 6 studies were compared. The random-effects pooled prevalence was 12.1% in menstrual fluid /endocervical sample, and 17.8% in serum sample.



Conclusion

The prevalence of HSV in semen-cervical sample was about 12%, compared to HSV in serum sample is about 17%. Therefore, HSV contribution to infertility will be **overestimated** when we use serum sample for diagnosis. It is noteworthy to mention that the seroprevalence of HSV IgG is much higher in general population, previously reported at 35% to 50%. In addition, given that current antiviral treatment for HSV has side effects that could cause infertility on its own, as seen in animal studies. More studies are needed to evaluate the role HSV plays in causation of infertility.

Figure 1. Studies enroll in this meta-analysis, Male

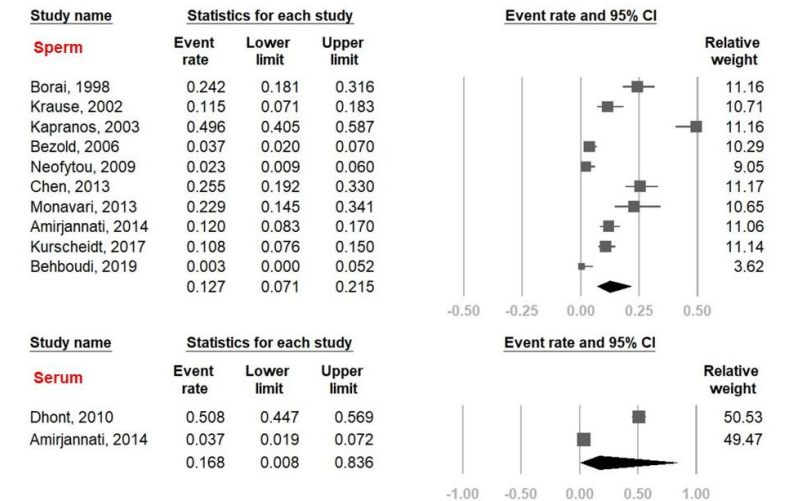


Figure 2. Studies enroll in this meta-analysis, Female

