

P21: Comparison of Serion ELISA classic HSV 1 or 2 IgG with HerpeSelect® for a seroprevalence study on 559 sera of healthy persons in the Netherlands.



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Objectives

Besides data from STD clinics, with a rather selected population, the only way of determining the impact of herpes infections in the population is by type specific seroprevalence studies. The most commonly used test for seroprevalence studies has been from HerpeSelect®. We evaluated the Serion ELISA classic (SEC) test against the HerpeSelect® HSV1 and HSV 2 ELISA for the purpose of seroprevalence determination on sera obtained from healthy persons for control of the vaccination program in the Netherlands.

Methods

559 sera from a population based serum bank survey in the Netherlands with an age-stratified sample was used (2006-2007). This serumbank was obtained for the purpose of evaluation of the vaccination program¹. Serion ELISA classic (SEC) test and the HerpeSelect® test were performed and interpreted according to the instructions of the manufacturers.

Table 1. Distribution of the different age-groups

Age groups	Number
0-1	57
1-5	54
5-10	58
10-15	55
15-20	53
20-25	57
25-30	56
30-35	58
35-40	56
40-45	54
Total	558

From one serum not enough material was available.

Results

Figure 1: Proportion HSV-1 IgG positives per age group

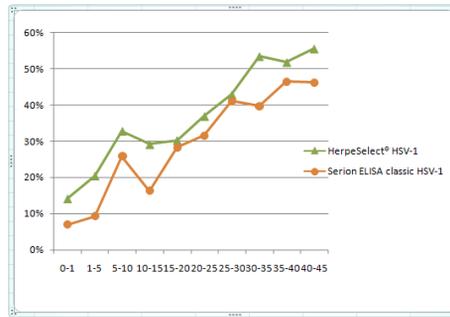


Figure 2: Proportion HSV-2 IgG positives per age group

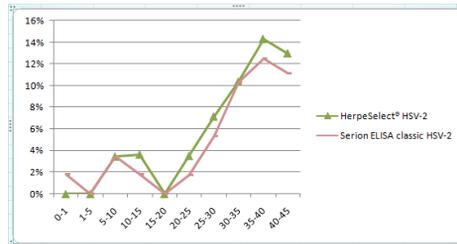


Table 2. Sensitivity, specificity of Serion Classic IgG HSV-1 ELISA with Herpesselect® as gold standard

		95% CI	
Sensitivity	0,78	0,72	0,83
Specificity	0,99	0,96	1
PPV	0,98	0,95	0,99
NPV	0,95	0,85	0,91

Table 3. Sensitivity, specificity of Serion Classic IgG HSV-2 ELISA with Herpesselect® as gold standard

		95% CI	
Sensitivity	0,68	0,5	0,81
Specificity	0,99	0,98	0,99
PPV	0,78	0,59	0,89
NPV	0,98	0,97	0,99

Results

The standard deviations of the proportions were relatively large due to the small number of sera per age-group. Therefore, with the Z test no significant difference was found in all age groups both for HSV-1 and HSV-2. The only significant difference was found between the proportions of the two test for the total group for HSV-1 IgG.

In the age group of 0-1 all positive sera were found in the age beneath 8 months for both HSV-1 and -2 and are maternal antibodies.

The Serion test was less sensitive if compared to the HerpeSelect® both for HSV-1 and -2 IgG. However, discrepancy analyses has to be performed with an accepted gold standard to assess this.

References

1. De Melker HE, Conyn-van Spaendonck MA. Immunosurveillance and the evaluation of national immunization programmes: a population-based approach. *Epidemiol Infect* 1998;121(3):637-43.

CONCLUSIONS

-No significant seroprevalence differences were found between the Herpesselect® and the Serion Classic test in different age groups for both HSV-1 and 2 IgG.

-Overall the Serion test seems to be well suited for seroprevalence studies.

