

FC RECEPTORS INDUCED BY HUMAN HERPESVIRUS-6

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The rate of seropositivity to human herpesvirus-6 (HHV-6) differs considerably depending on the criteria used. The immunofluorescence (IF) titre of $\geq 1:40$ was registered in 26 % of healthy subjects from West Germany (1). When initial serum dilution of 1:10 was regarded for positive, about 85 % of Swedish adults and children had antibodies to HHV-6 (2). But in low serum dilutions nonspecific reactions caused by other herpesviruses such as cytomegalovirus and HSV induced Fc receptors may give misleading results.

To find evidence for the expression of Fc receptors HHV-6-infected HSB-2 cells (provided by Dr. R. Gallo, NIC, Bethesda) were fixed on slides with cold acetone on day 7 p.i. The isolated Fc portion of human IgG (0.3 mg/ml; provided by SIFIN, Berlin) was incubated for 1 hr at 37 °C with the slides, then they were washed and overlaid with FITC-labelled goat antibody to human immunoglobulin. HHV-6 infected cells showed a bright fluorescence located within the nucleus and the cytoplasm. Uninfected cells treated with Fc fragment and HHV-6-infected cells treated with buffer were negative. To ascertain whether the seroprevalence of HHV-6 is influenced by the test procedure, we compared the standard IF test (3) with the anti-complement immunofluorescence test (ACIF).

In the latter system, to the Fc receptors nonspecifically bound IgG is not labelled, since complement attaches only to the antigen-antibody complexes.

Serum free from antibodies to HHV-6 served in ACIF as source of complement; FITC-labelled guinea pig anti-human β 1C - β 1A/globulin (SIFIN, Berlin) was used as secondary antibody. The antibody prevalence ($\geq 1:10$) in 340 normal subjects (5 month to 50 years of age) was at 97 % measured by IFA and at 58 % by ACIF. As shown in the Table, the antibody levels evaluated by both tests differed. The ACIF may be an alternative method for antibody measurement.

Table 1. Antibody titres to HHV-6 in normal subjects measured by IFA and ACIF

ACIF antibody titre	IFA antibody titre						Total
	<10	10	20	40	80	≥ 160	
<10	10	29	44	24	7	3	117
10	0	17	14	16	8	3	58
20	0	5	14	26	16	8	69
40	0	1	2	16	13	12	44
80	0	0	2	4	13	15	34
≥ 160	0	0	0	0	2	16	18
Total	10	52	76	86	59	57	340

Note: Antibody titres are the reciprocals of limiting dilutions

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