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THE PREVALENCE OF IgG ANTIBODIES TO PARVOVIRUS B19 IN PREVIOUSLY TREATED HEMOPHILIA A PATIENTS ENROLLED IN THE "SUIVI THÉRAPEUTIQUE NATIONAL DES HÉMOPHILES" (SNH)

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Although methods of viral attenuation in plasma-derived clotting factor concentrates have improved, there is still a possibility that such products may transmit blood-borne non-enveloped viruses such as Parvovirus B19. The recombinant products actually use human albumin as stabilizer in the final product to preserve the enzymatic activity of factor VIII. Some authors have recently demonstrated that such products could contain Parvovirus B19 DNA (Eis-Hübinger *et al. Thromb Haemost*, 1996). In this context we present an epidemiological study that analyses the anti-B19 IgG seroprevalence in a cohort of hemophilia A patients treated by recombinant FVIII (R) only or by at least one plasma-derived FVIII concentrate (NR).

Patients and Methods: From October 1994 to December 1997, 38 French Hemophilia Centers have taken part in the SNH promoted by the Health Ministry to ensure the follow-up of hemophiliacs in France. Anti-B19 IgG seroprevalence was studied by immunoassays using recombinant B19 antigens in 615 previously treated hemophilia A patients (FVIII level < 2 % in 420). In order to assess the role of the type of FVIII (R vs NR) and potential confounding factors [age, number of cumulative exposure days (CED) to FVIII, severity of the disease, a previous blood cells and/or plasma transfusion (PBCPT), at entry into the study] on the Parvovirus B19 seroprevalence, univariate and multivariate logistic regression analyses were performed (SAS Software).

Results: Univariate analysis (UA) selected age, CED, PBCPT and Factor VIII type to be significantly associated with the B19 seropositivity risk ($P = 10^{-4}$ for all factors), but not the severity of the disease (P = 0.48). Results of multivariate analysis are shown below (UA selected factors only).

		N	B19 Seropositivity %	Odds Ratio	95%CI	Global P
Age	< 2 years	30	20.0	1.0		
	2 to 4 years	56	51.8	0.7	0.2 - 2.8	0.0001
	5 to 14 years	241	95.9	4.3	1.1 - 17.7	
	≥ 15 years	288	97.6	7.3	1.7 - 30.5	
CED	1 to 9	63	52.4	1.0		
	10 to 24	64	67.2	0.8	0.3 - 2.4	0.0005
	25 to 99	122	91.0	3.4	1.1 - 10.2	
	≥ 100	366	98.4	7.7	2.3 - 25.9	
PBCPT	No	378	84.1	1.0		
	Yes	237	96.6	1.4	0.5 - 4.0	0.4900
Factor VIII type	R	61	21.3	1.0		
	NR	554	96.4	17.0	6.6 - 44.0	0.0001

Conclusion: The results of this study suggest that IgG Parvovirus B19 seroprevalence is lower for the hemophiliacs A previously treated by recombinant FVIII only (with plasma derived albumin as stabilizer) than for those treated by at least one plasma-derived FVIII concentrate, independently of age, severity of the disease, number of cumulative exposure days to FVIII and previous blood cells and/or plasma transfusion.