

INTRODUCTION

- Febrile seizures (FS) occur between the age of 1 and 60 months, with fever, are generalized and usually lasting less than 15 minutes.
- The etiology of FS is not known, although infections, immunizations and genetic susceptibility, all have been linked to an increased risk of FS. Herpes virus 6 (HHV6) and Cytomegalovirus (CMV) are neurotropic virus and remain latent after a primary infections.
- 10 to 50% of FS cases in children are associated with HHV6 primary infection. An association between FS and CMV infection has not been established.

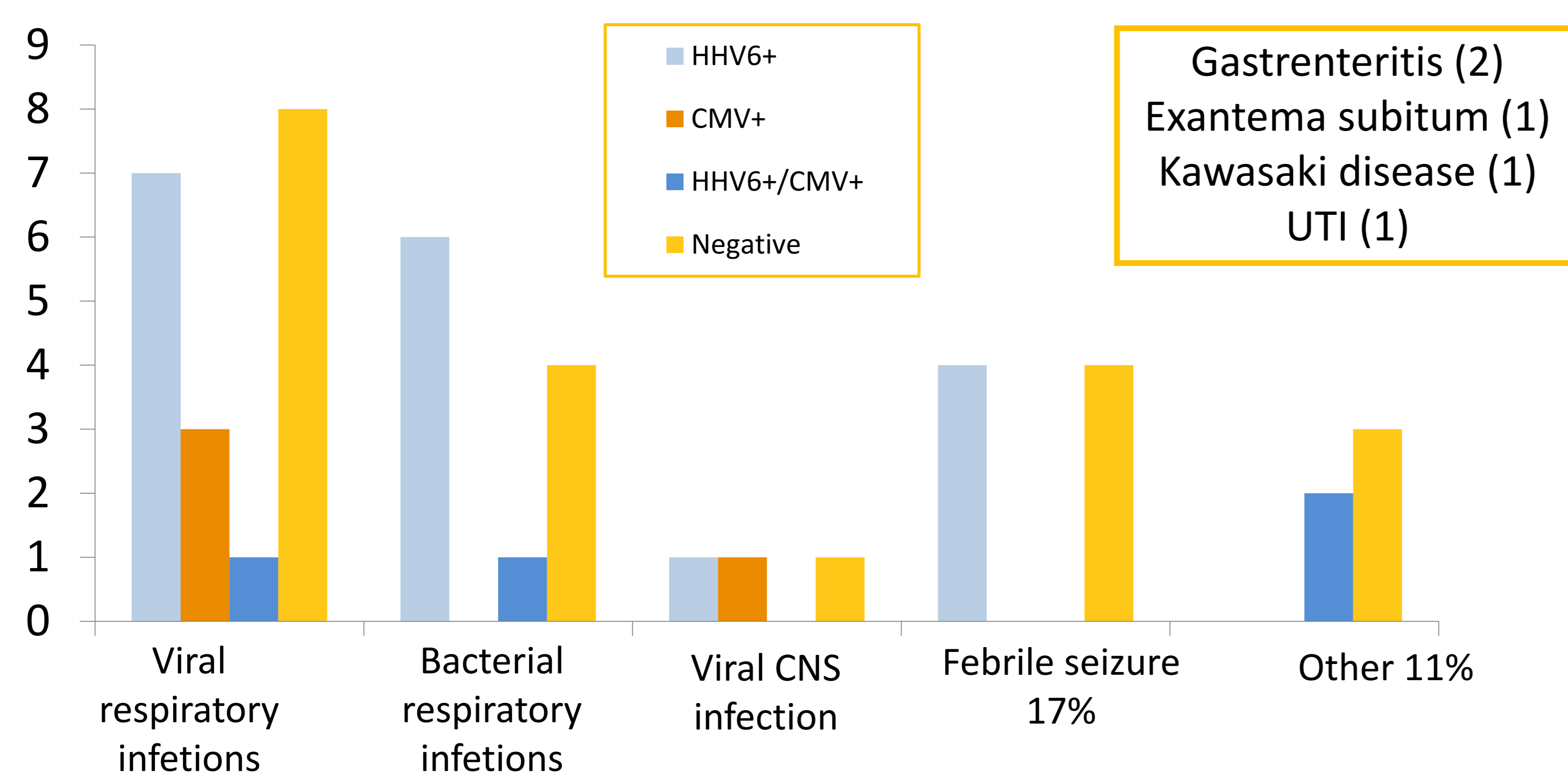
AIMS

- To investigate the association between HHV6 and CMV and FS

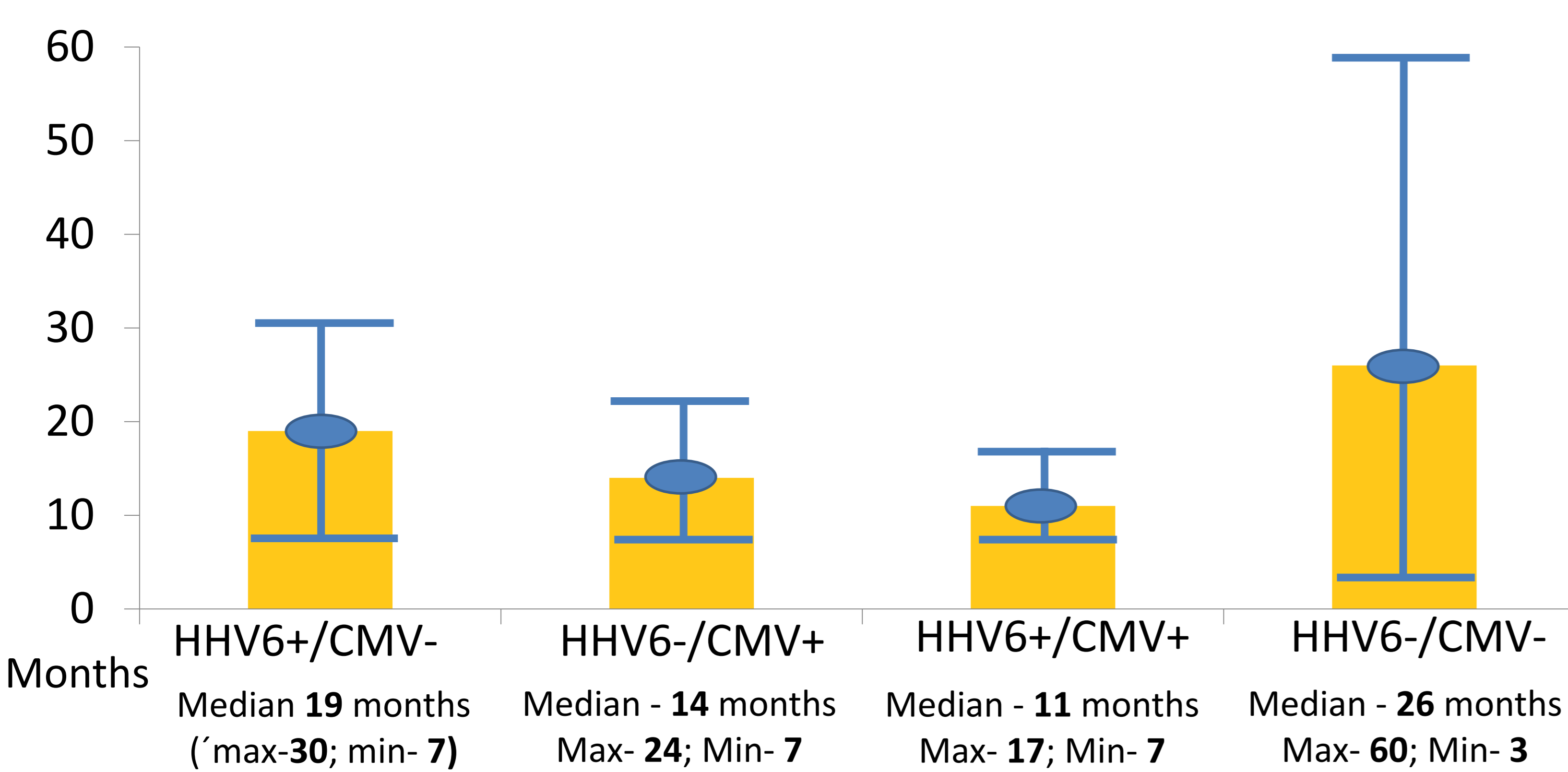
MATERIAL AND METHODS

- Observational study of children (3months to 5 years) with FS, without known neurological disease, presented to the emergency department of a level III hospital.
- Real time polymerase chain reaction (PCR) in whole blood and serology were made for HHV6 and CMV in the acute setting. Demographic, clinical and laboratory characteristics were studied.

RESULTS n=46



Gastroenteritis (2)
 Exantema subitum (1)
 Kawasaki disease (1)
 UTI (1)



	CMV - HHV6 - (n=20)	CMV + (n=8)	HHV6 + (n=22)	CMV + HHV6 + (n=4)
Family history	9/20 (45%)	1/8 (12,5%)	7/22 (31,8%)	0/4 (0%)
Mean days of fever	1,5	1,38	2,2	1,75
First seizure	17/20 (85%)	6/8 (75%)	20/22 (91%)	4/4 (100%)
Complex seizure	1/20 (5%)	1/8 (12,5%)	5/22 (23%)	1/4 (25%)
Mean seizure duration (minutes)	5	3	6	4
Mean leukocyte count	15	12,4	8,7	12

		CMV			Total	
		PCR +		PCR -		
		Low IgG avidity	High IgG avidity			
HHV6	PCR +	IgG -	0	2	2	4
		IgG +	1	1	16	18
PCR -			1	3	20	24
Total			2	6	38	46

CONCLUSION

- We found a significant percentage of FS associated with HHV6.
- HHV6 causes a mild disease with unspecific signs in the first days of illness.
- The reactivation of CMV is a known fact in septic patients, but not in this kind of mild disease. Our findings suggest a possible association with FS in younger patients. The cause-effect relationship remains to be established.
- It is not known how or why seizures are generated in response to fever, and what is/are the causative factor(s) of FS in children. Although a benign disease, some children progress to having epileptic syndromes. The challenge is to identify the group at risk, and so, further studies are needed to identify these risk factors.

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