

Immune Events Preceding Neuralgic Amyotrophy



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OBJECTIVE

The pathophysiology of **neuralgic amyotrophy (NA)** is likely to be multifactorial, combining genetic, dysimmune and mechanical factors. Potential triggers like **preceding infection**, vaccination, and strenuous exercise have been described in the literature, but in previous cohorts there is lack of a systematic serological screening.

We aimed to identify the most common pathogens and immune triggers associated to the acute phase of NA in Switzerland.

METHODS

Swiss multicenter, prospective, observational matched case-control study.

SUBJECTS

• **53 NA patients** (M/F: 31/22; mean age 47 ± 15 y).

• **53 healthy subjects**, age/sex-matched.

► Clinical data and biological samples were collected **within 90 days** from disease onset.

SEROLOGICAL TESTS:

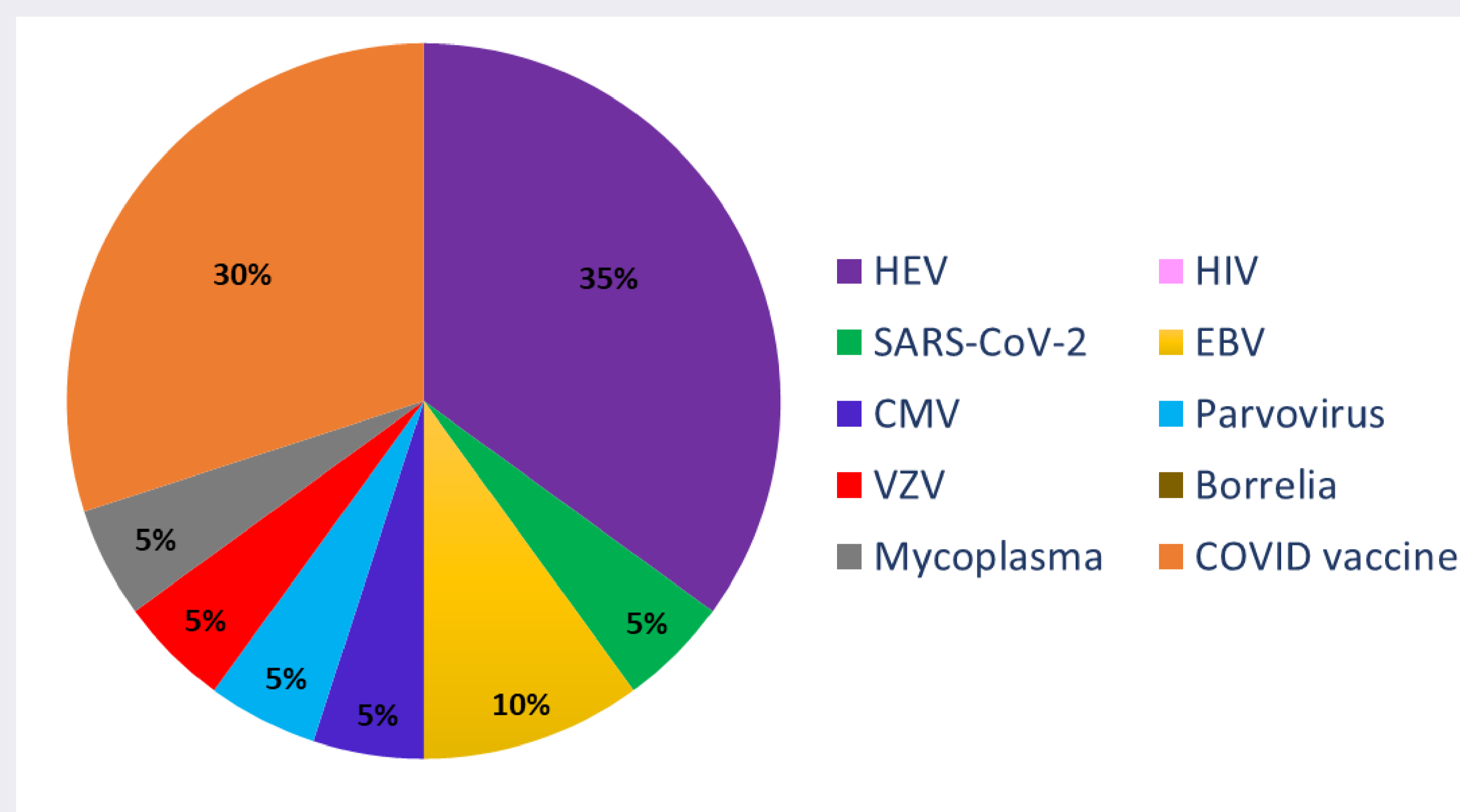
- **Viruses:** HEV, HIV, EBV, CMV, SARS-CoV-2, Parvovirus B19, VZV
- **Bacteria:** *Borrelia burgdorferi*, *Mycoplasma Pneumoniae*

CONCLUSIONS:

- 1) An immune trigger could be identified in 38% of NA cases.
- 2) The most prevalent immune triggers were HEV infection and COVID19 vaccination.
- 3) A larger cohort is needed to prove a correlation between clinical features and a specific immune trigger.

RESULTS

Immune triggers in NA cases within 90 days from disease onset



Types of proven viral and bacterial infections [n (%)]

Table 2. Types of proven viral and bacterial infections [n (%)].

	case	control
viral infections	13 (24.52)	0 (0.00)
HEV	7 (13.21)	0 (0.00)
HIV	0 (0.00)	0 (0.00)
SARS-Cov-2	1 (1.89)	0 (0.00)
EBV	2 (3.77)	0 (0.00)
CMV	1 (1.89)	0 (0.00)
Parvovirus B19	1 (1.89)	0 (0.00)
VZV	1 (1.89)	0 (0.00)
bacterial infections	1 (1.89)	0 (0.00)
Mycoplasma	1 (1.89)	0 (0.00)
Borrelia	0 (0.00)	0 (0.00)

HEV: Hepatitis E virus; HIV; AIDS virus; SARS-Cov-2: COVID; EBV: Epstein-Barr virus; CMV: Cytomegalovirus; VZV: Varicella Zoster virus.