sible for CTA acquisition. On the other hand, CTA producing poisons stimulate neural circuits which can be associated with taste inputs.

The venom of vipers is predominantly haemotoxic and cytolytic. Forbes et al.[12], and Omori et al.[13] reported that haemorrhage was the outstanding symptom of viper poisoning due to damage of vascular endothelium by the venom constituent haemorrhagin. Formation of clots was more common. Dubois and Geiling[14] argued that haemotoxic effects of viper venom are due to enzymatic destruction of cell membranes and tissues. The cytolytic venoms cause extensive haemorrhages at the site of injection and the resulting haemorrhage produce functional impairment throughout the body. Muscular paralysis has also been observed after viper's bite. CTA observed in the present experiment indicates that the venom elicits internal malaise. CTA seems to be due to the toxoid substances circulating in the blood rather than to haemorrhagia and muscular paralysis.

This conclusion is supported by the failure of the antivenom, which blocks the overt symptoms of poisoning, to counteract the CTA-eliciting properties of the venom. Further research is needed to find out whether higher antivenom dosages are more efficient. The possibility of using the CTA paradigm for detecting sublethal effects of the venom extends the toxicological characteristics of natural poisons and can serve for assessment of various therapeutic interventions.

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Decrease in motor activity – an early symptom in the course of experimental allergic encephalomyelitis (EAE)[1]

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Summary. Motor activity has been followed in rats during an experimental allergic encephalomyelitis (EAE). The disease was produced by transfer of lymph node cells from sensitized syngenic donors. Small and large movements were permanently registered by an electric activity meter. It could be demonstrated that a decrease of the motility is an early symptome of the disease. Therefore the measurement of the motoric activity might be a useful parameter in the classification of EAE.

When experimental allergic encephalomyelitis (EAE) is produced by passive transfer with immunized cells, clinical signs, such as paralysis of tail and hindlimbs, are often faint. Therefore we looked for an additional objective indicator which can help us define the course of the disease. With help of the Animax activity meter (ABFARAD) we could follow changes in motor activity. The sensing unit of the instrument consists of an oscillator operating at a frequency of 1.2 MHz and a resonance circuit tuned to this frequency. The weight, and characteristics, of the body of the subject determine the change in the resonance circuit, that is, they determine the voltage across the capacitor in the tuning circuit. Advantages of this system are that there is no detectable interference with the animal and that the instrument is independent of light, so that the nocturnal behaviour can be studied. Although we observed in our tests that not all movements were registrated by the activity meter, we suggest that in the statistical average always the same percentage of large and small movements will be recorded.

Figures 1 and 2 show the motor activity of a full-grown female Lewis rat which was injected with 5×10^8 lymphocytes from immunized syngenic donors. The animal housed

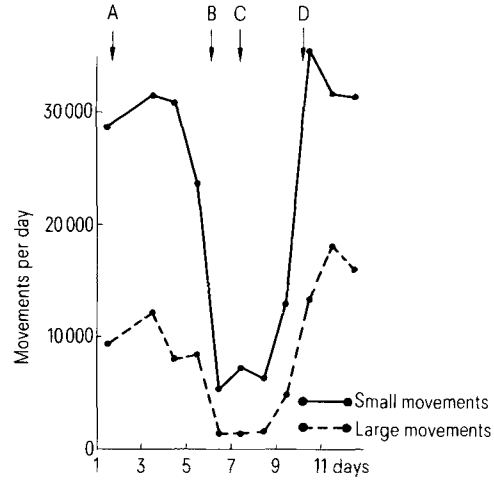

Fig. 1. Changes in activity before and after transfer of EAE by lymphocytes (Lewis rat ♀). A, Transfer of lymphocytes; B, flaccid tail; C, hindlimb paralysis; D, recovery.

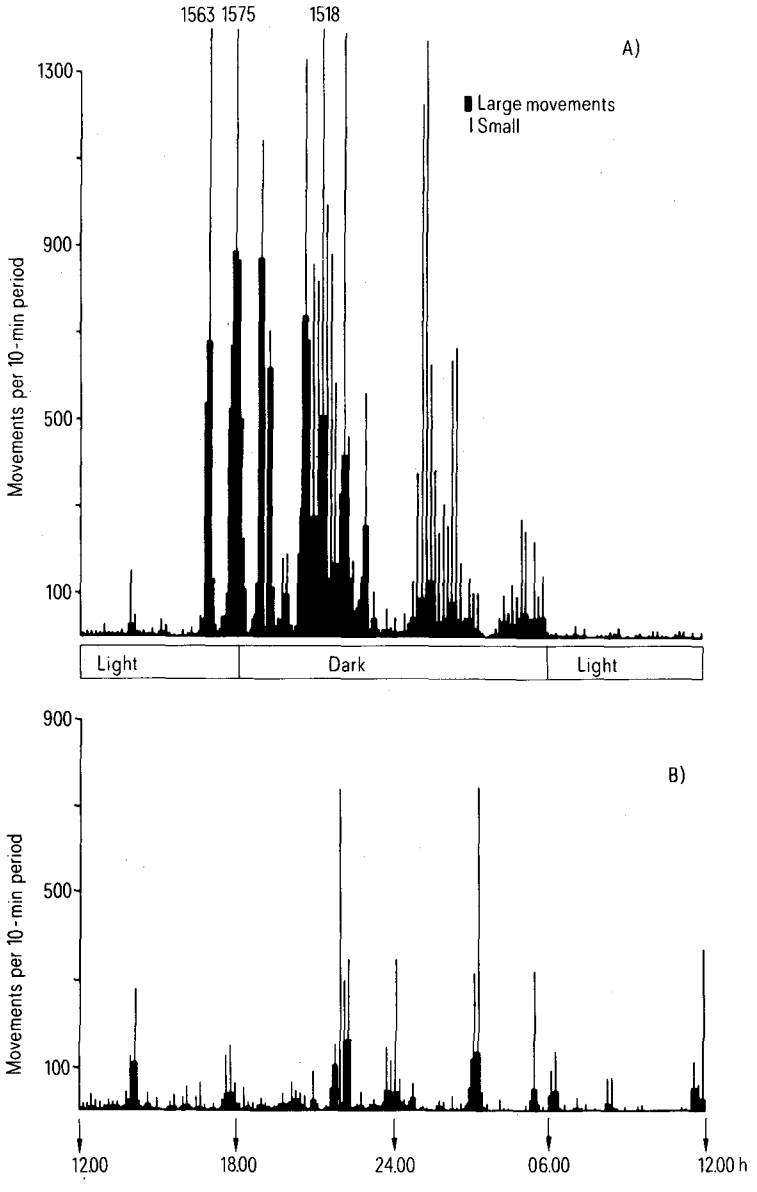

Fig. 2. Diurnal activity pattern. A, Normal female Lewis rat; B, in the same animal 5 days after transfer of EAE by lymphocytes.

in the measuring cage already some days before the transfer to become familiar with the experimental conditions. It had free access to food and water. The mean frequency of movements per day of the untreated animal were about 30,000 and about 8000 respectively. After transfer of lymphocytes we observed initially a slight increase in activity. But about 1 day before the appearing of other visible signs, the movements decreased significantly. Whereas parallel to the disappearance of paralyses at day 8 (figure 1) the movements increased to reach normal numbers after a period of slight hyperactivity. Figure 2 gives diurnal activity profiles before and after passive transfer of the disease. As in figure 1, the diminished activity is obvious. Besides the loss of weight, which is regarded as the earliest and most sensitive symptom of EAE[3,4] the changes in motility - measured in the Animex activity meter - may become a very useful parameter in the classification of EAE. This is of interest mainly in those subclinical cases where paralyses are not visible and the disease has to be objectified in another way.

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