

Biochemical characteristics associated to rabbit telepathy

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INTRODUCTION

There are sequences of events that occur under conditions of stress which can be grouped in behavioural and physical adaptations. The link between the stimulus and the responses can be mediated or modulated by the nervous system. Previously, Peoc'h and collaborators have performed experimental telepathy in rabbits and reported the presence of spontaneous fear and blood flow variations in rabbits after their separation. The phenomenon of fear transmission between rabbits might be associated to a neuronal hypersensitivity as the result of a stress stimulus.

In this context, the aim of the present study was the evaluation of biochemical characteristics developed during the occurrence of rabbit telepathic transmission of fear.

MATERIALS AND METHODS

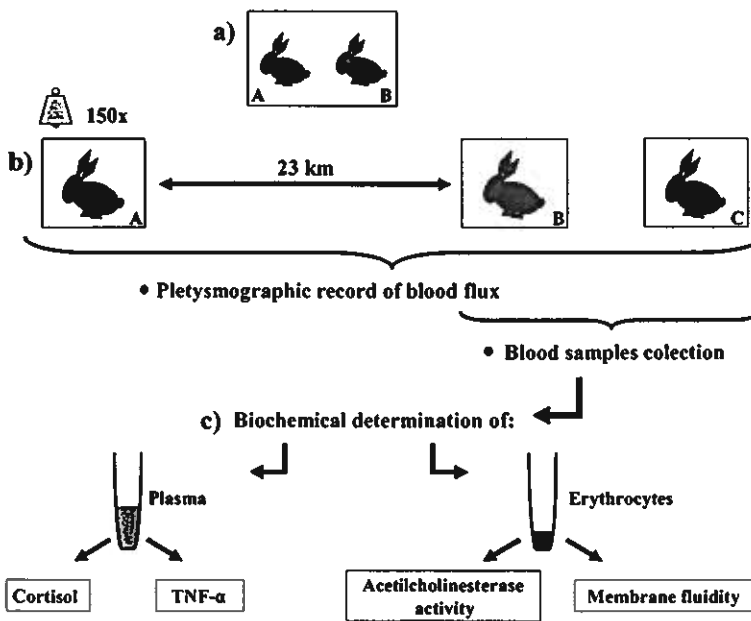


Figure 1. Schematic representation of the experimental procedure.

Briefly, telepathy experiments were performed according to Peoc'h. 8 couples of sister rabbits (A and B) were brought up together in the same cage for 3 months (a). After this period, rabbits A were separated from rabbits B and kept at 23 km distance (b). A control group of 8 rabbits C not related to rabbits A was also included in the study. During the telepathic transmission experiment, rabbits A receive a stress stimulus caused by the ringing of a bell, for 150 times. That induces a fear response identified by variations in blood flux which is being monitored with a pletysmograph. Simultaneously, blood flux of rabbits B and C is also monitored. Each time there is a fear response occurring in a 10 seconds time frame after the stress stimulus of rabbits A, it is considered "fear transmission event". Ten minutes after the end of the experiment, anticoagulated blood samples were collected from rabbits B and C and the following parameters were determined (c): free plasma cortisol and TNF- α levels were assessed by ELISA, erythrocyte acetylcholinesterase activity was determined by spectrophotometry and erythrocyte membrane fluidity was analysed by fluorescence anisotropy.

RESULTS

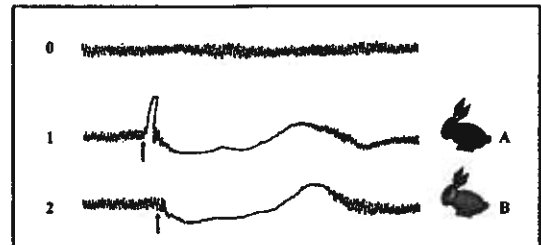


Figure 2. Representative example of telepathic fear transmission between two rabbits.

Curve 0: Pulse of rabbit resting
Curve 1: Rabbit A presents fear with an initial start movement (deflexion upwards) and then a bradycardia reflex.
Curve 2: Rabbit B presents fear 2 seconds after rabbit A

Table 1. Fear transmission events and biochemical parameters evaluated

	Rabbit B	Rabbit C
Fear transmission events	15,3 \pm 2,7 % <i>P</i> < 0,0001	1,33 \pm 1 %
Plasmatic cortisol concentration	3,25 \pm 0,682 μ g/mL <i>P</i> < 0,05	4,951 \pm 1,146 μ g/mL
Plasmatic TNF- α concentration	Not detected	Not detected
Erythrocyte AChE activity	68 \pm 20 U/min/mg Hb	67,5 \pm 20,5 U/min/mg Hb
Erythrocyte membrane fluidity	DPH: 0,290 \pm 0,038 TMA-DPH: 0,325 \pm 0,010	DPH: 0,313 \pm 0,026 TMA-DPH: 0,322 \pm 0,011

Presented are average values \pm STD (n=8). Unpaired t test was applied and significant *P* values (in comparison with control rabbits) are noted where appropriate

CONCLUSIONS

- Rabbit erythrocyte integrity was maintained after the telepathy experiments
- TNF- α , a marker of inflammatory disturbance, was not detected as consequence of the telepathy experiments
- A bradycardia effect, induced by telepathic fear transmission was followed by a significant decrease of plasma cortisol levels

The limbic system might be acting in order to limit the telepathy response with glucocorticoid receptors saturated with cortisol at the hippocampus level

Acknowledgments

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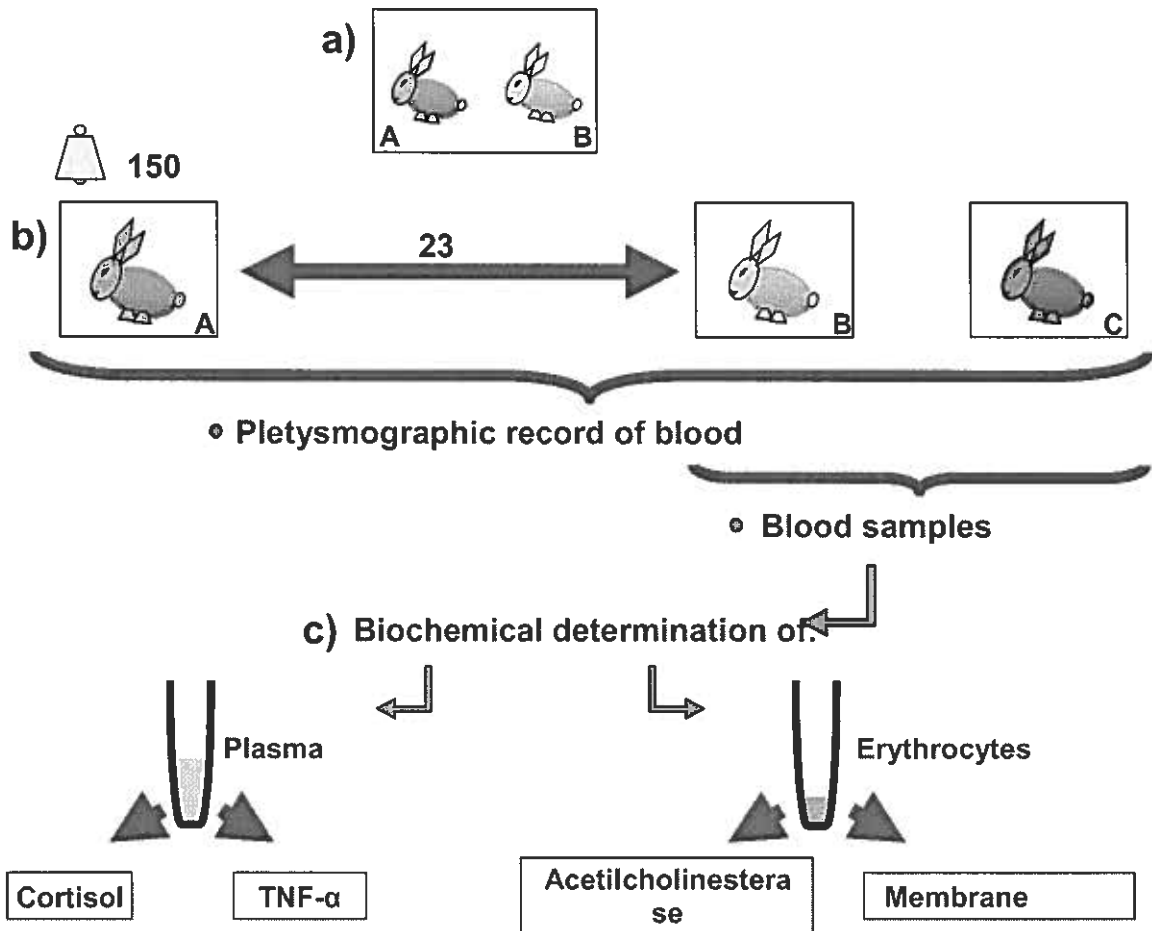


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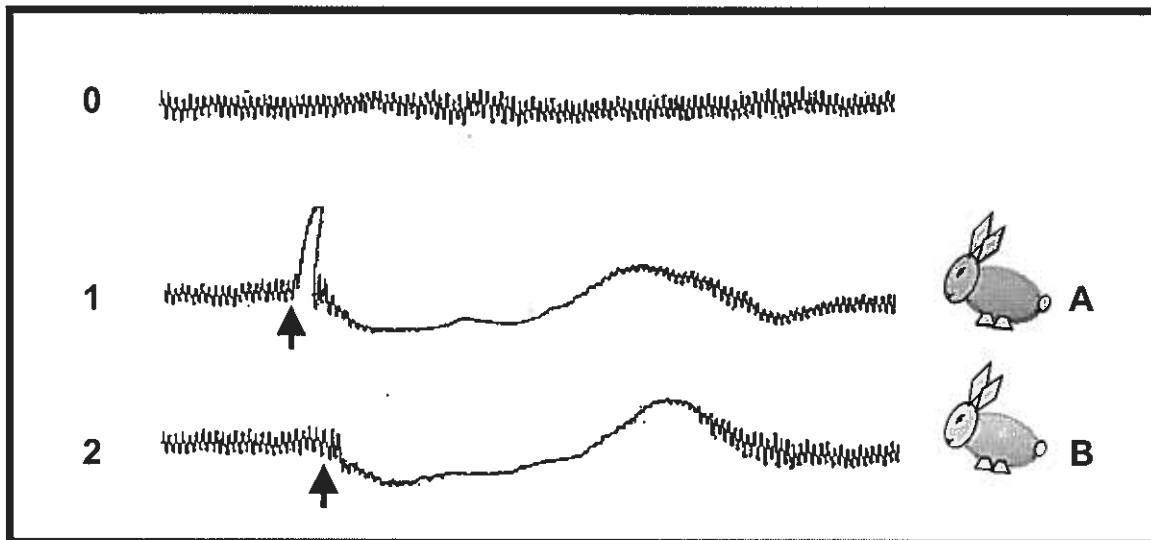




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