

Objective: The aim of this thesis is to determine both the number and incidence of muscle twitches muscle activity in individual groups of pups in rats, possibly record the simultaneous occurrence of EEG activity, which points to the involvement of cortical levels of motor control.

Method: The experiment was conducted on 4 groups of pups in rats, divided according to age, which was performed by the EMG electrodes into the extracellular space neck muscles and electrodes 6 - 4 sensor, reference and ground epidural placed for EEG activity. Have also been reported already mentioned curves and captured video footage necessary for final processing and analysis.

Results: After statistical evaluation of experimental data has been demonstrated numerous of muscle jerks with developmentally youngest experimental group P7 and occurrence locomotor activity in developmentally older groups correlated with increased activation in cerebral cortex, which was confirmed by increased levels of energy and entropy of the EEG signal. These values also increased with increasing age, as evidenced by the gradual maturation of cortical motor control.

Keywords: motor ontogenesis, surface electromyography, electroencephalography, descending path, rat, clonus