

ABSTRACT

Corpus callosum is the main commissure linking cortex of the right and left brain hemisphere. For the first time, the callosal axons are observed during E18, when they cross the midline. In PND 5, most axons reach the contralateral cortex, and at the end of the second postnatal week, the callosal projection neurons and axon terminals are located similarly to the adult animal. The interhemispheric response was first observed in the rat in PND 4 but myelination in PND 12, suggesting that the transcallosal response is not dependent on myelination of callosal fibers. As the rat age increases, the wave duration of the TCR, latency peak and threshold decreases. As opposed to that, amplitude of the positive and negative wave increases with age. TCR may be affected by acute drug application or chronic exposure to various effects, such as hormones.