

Abstract

Title of work: Detection of neuronal pathways after CNS lesions by using dextran amine.

Aim: Develop a methodology for pathway tracing with the substance transmitted by axonal anterograde transport and compare iontophoretic and pressure injection of BDA.

Methods: The experiment was performed on adult rats which were injected iontophoretic and pressure anterograde tracer BDA. One week after injection were decapitated in deep anesthesia, their brains removed, frozen in dry ice and stored at -70°C . The brains were then cut into thin coronal slice ($50\ \mu\text{m}$), immunolabeled and loaded on microscopic slides. Individual sections were examined labeling nerve fibers at the injection site, its surroundings and contralateral side of the hemisphere.

Results: After injections of anterograde tracer BDA into the nervous tissue have been shown labeling of nerve fibers at the injection site, surroundings and contralateral side of the hemisphere. As an efficient method for its injection was determined according to results of the pressure method.

Key words: anterograde tracer, BDA, iontophoretic injection, cerebral ischemia, neuroplasticity