Ultrastructural changes of CA1 subfield of hippocampus of experience stressed rat after acute heat stress

ABSTRACT

The aim of the present study is to use the transmission electron microscope to characterize the cell death of pyramidal cells from the CA1 subfield of hippocampus after 15 minutes received thermal stress in stress-experienced Sprague Dawley rats. Findings-the rats exposed to acute heat at 42 ºC, the nucleus membrane was destroyed and indeed some of the intracellular went out. In conclusion, acute thermal stress really caused injuries into neurons of the CA1 subfield of hippocampus. Repeated forced swimming stress early in life had enough influence to manipulate heat transmission. Therefore, less alteration are presented by the thermal stress in the experience stressed rat.

Keyword: CA1; Pyramidal cell; Cell death; Thermal stress; Experience stressed rat