ABSTRACT

ENHANCEMENT OF THE CORE IS DUE ABNORMAL CELLS RIGHT VENTRICLE HIPERCONTRACS IN HEART MALE MICE (*Mus musculus L.*) AFTER EXPOSURE TO HIGH VOLTAGE ELECTRIC FIELDS

By

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Human need for electrical energy continues to grow. The amount of electric field strength required WHO (World Health Organization) is 5kV and if exceeds specified limits may cause problems to the heart. The heart is a muscular pump organ in the chest that work continuously without stopping to pump blood throughout the body. Given the role of the heart is essential for survival, then conducted research to determine the influence of an electric voltage electric fields on cardiac function were analyzed histopathologically.

This study aims to determine enhancement the number of abnormal cell nuclei due to the existence of the right ventricle of the heart hipercontracs after to exposure to high.

This is the type of experimental research by using 24 male mice (*Mus musculus L.*) divided into 4 groups. Test animals exposed to high voltage electric field for 37 days. Animal tests are grouped into 4 groups with each 6 repetitions, ie K group or a control group who were not given exposure to high voltage electrical field, group P1 are given exposure to the electric field voltage of 5 volts for 8 hours, the P2 is given exposure to electric fields voltage of 6 volts for 8 hours and P3 groups are given exposure to voltage electric field 7 volts for 8 hours. Parameters are taken is the number of abnormal cell nuclei.

This study was designed by using Completely Randomized Design (CRD) with repetition as much as 6 times in each experimental group unit. From the analysis using Analysis Of Variant (ANOVA) followed by LSD 5% obtained $p = 0.000$ for the number of abnormal cell nuclei. The analysis showed that there was a significant association between exposure to electric fields by the number of abnormal cell nuclei ($p < 0.05$).

Keywords: Electric Field, *Mus musculus* L., hipercontracs, cell nuclei