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THE COMPARRED EFFECT OF ZYPRASIDONE AND HALOPERIDOL AT HIPPOCAMPAL AND FRONTAL CORTEX AT RATS

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Background: The alteration of hippocampal and prefrontal structures is linked with schizophrenia cognitive impairment and negative symptoms. The antipsychotics can induced apoptotic mechanisms correlated with the psychopharmacological mechanism of excesive blocking of the D2 receptors. Distress determined increase of the glucocorticoid aggression wich drive to the decrease of neuroprotective capacity at the brain level.

Methods: We formed 5 study lots (5 adults rats) and a control lot. The substancies were administrated intraperitoneal, daily, saline solution equivalent to: ziprasidone (1.25mg/kg/day) and haloperidole (0.20mg/kg/day), dexametasone (0.20mg/kg/day):
N1 - Haloperidole; N2 - Dexametasone; N3 - Ziprasidone; N4 - Dexametasone and Haloperidole; N5 - Dexametasone and Ziprasidone; N6 -control lot.
We monitorised the cardiovascular function, respiration and EPS, without signaling any serious deadly adverse event. The rats were sacrificed during the 10th day and 21th day.

Results: Frontal cortex and hippocamp were the most intensely affected even since the 10-th day to the N4 (haloperidole and dexametasone) lot with massive neuronal loss at the VI, V, and IV frontal cerebral layers.
The lots treated with ziprasidone presented significant lesser structural changes in frontal cortex and hippocamp, comparative to haloperidole. The lots treated with dexametasone and ziprasidone (N5) are lesser affected at the cerebral structure level.

Conclusions: Haloperidole has a significant decrease in neuroprotection. Ziprasidone demonstrated an neuroprotective effect.

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