

## MEETING ABSTRACTS

# THE EARLY TISSUE ALTERATION INDUCED BY DIFFERENT OXIMES IN RATS

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Newly developed oximes, when taken in overdoses and sometimes even when introduced within therapeutic ranges, may injure the different organs. In this work, we focused our attention on an investigation of morphological lesions produced by increasing doses of asoxime, obidoxime, K027, K048, and K075 were selected as experimental reactivators. The whole experiment was conducted on Wistar rats. All rats were sacrificed 24 hrs and 7 days after single *im* application of 0.1 LD<sub>50</sub>, 0.5 LD<sub>50</sub> and 1.0 LD<sub>50</sub> of each reactivator. Tissue alterations were carefully quantified by semiquantitative grading scales - cardiac, diaphragm, muscular, pulmonary, gastric, hepatic and splenic damage score, respectively. Morphological structure of different tissues treated with 0.1 LD<sub>50</sub> of all reactivators were similar to those evaluated in the control groups. Focal and reversible degenerative and vascular changes, were established in tissue samples after treatment with 0.5 LD<sub>50</sub> of asoxime, obidoxime and K027 ( $p < 0.01$  vs. control group). Acute alterations were developed in tissue samples within 7 days following treatment with 0.5 LD<sub>50</sub> and 1.0 LD<sub>50</sub> of all reactivators. The most severe tissue alterations were found in rats treated with 1.0 LD<sub>50</sub> of K048 and K075 ( $p < 0.001$  vs. control and asoxime group, respectively). Our results showed that all AChE reactivators given by a single, high, unitary dose regimen, have adverse effect not only on the main visceral and muscular tissues, but on the whole rat as well, but the exact cause-effect relationship causing cellular injury remains to be established in further investigation.

*Keywords: reactivator; oximes; toxicity; pathohistology; tissue injury*