BEHAVIORAL TRAITS PREDICTING COCAINE-CONDITIONED PLACE PREFERENCE IN MICE: ROLE OF ANXIETY AND THE BASOLATERAL AMYGDALA

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Aims. The individual susceptibility to cocaine addiction, a factor of interest in the understanding and prevention of this disorder, may be predicted by certain behavioral traits. However, these are not usually taken into account in research, making it difficult to identify whether they are a cause or a consequence of drug use. **Methods**. Male C57BL/6J mice underwent a battery of behavioral tests (elevated plus maze, hole-board, novelty preference in the Y maze, episodic-like object recognition memory and forced swimming test), followed by a cocaine-conditioned place preference (CPP) training to assess the reinforcing effect of the drug. In a second study, we aimed to determine the existence of neurobiological differences between the mice expressing high or low CPP by studying the number of neurons in certain addiction-related structures: the medial prefrontal cortex, the basolateral amygdala and the ventral tegmental area. **Results**. Anxiety-like behaviors in the elevated plus maze successfully predicted the cocaine-CPP behavior, so that the most anxious mice were also more likely to search for cocaine in a CPP paradigm. In addition, these mice exhibited an increased number of neurons in the basolateral amygdala, a key structure in emotional response including anxiety expression, without differences in the others regions analyzed. **Conclusions**. Our results suggest a relevant role of anxiety as a psychological risk factor for cocaine vulnerability, with the basolateral amygdala as potential common neural center for both anxiety and addiction.

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