Neurotoxic lesion of anteromedial/posterior parietal cortex disrupts spatial maze memory in blind rats

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The primary visual cortex of rats is surrounded laterally (in Oc2L) and medially (in Oc2M) by several peristriate visual areas. Previous studies from our laboratory demonstrated that bilateral lesions in Oc2L result in visual pattern discrimination deficit, and in failure to solve a conditional discrimination which requires figure-background association. In contrast, neurotoxic lesions of the rostral part of Oc2M (which contains the anteromedial and anterior peristriate visual areas, collectively referred to as AM complex) result in deficits in visuospatial discrimination, and in disruptions in visual tasks involving spatial memory. The objective of this study was to behaviorally test the role of AM complex in a spatial memory task in absence of visual cues. For this purpose, we analyzed memory retention of Lashley III maze in blind rats after bilateral ibotenate lesions in AM complex, or in the primary visual cortex (V1, Oc1), to test the hypothesis that AM complex is essential for th