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Title: Region Specific Alterations in Astrocyte and Microglia Morphology Following Exposure to Blasts in the Mouse Hippocampus

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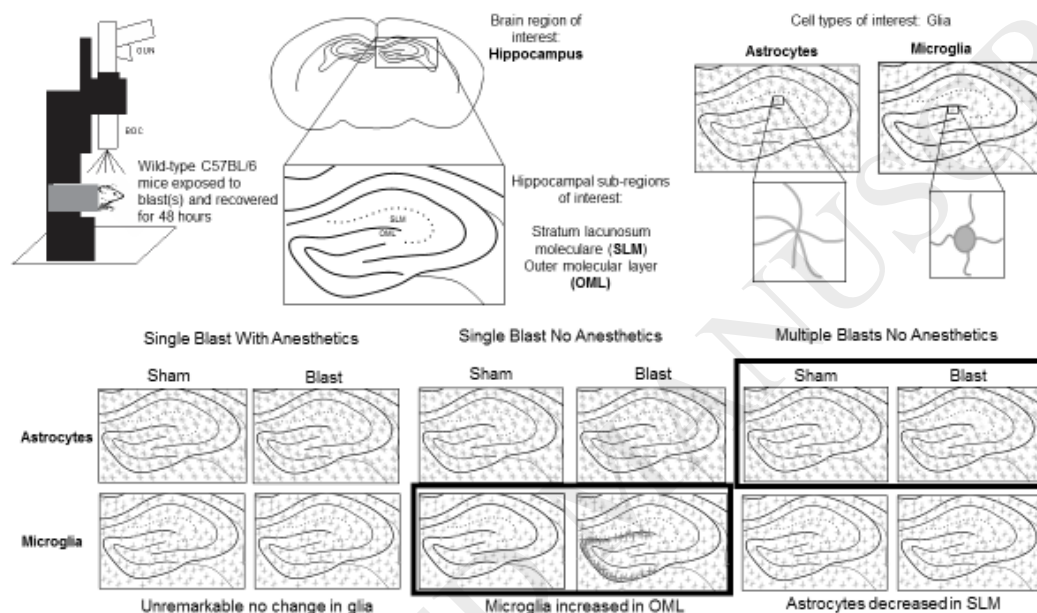


Region Specific Alterations in Astrocyte and Microglia Morphology Following Exposure to Blasts in the Mouse Hippocampus

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Graphical abstract



Highlights

- Anesthetics/analgesics may impact the interpretation of blast studies.
- Blast changes in microglial phenotypes were blocked by ketamine/xylazine.
- Astrocyte GFAP decreased after multiple blasts without ketamine/ xylazine.
- Single vs. multiple blasts without ketamine/xylazine affects glia differently.

Abstract

Traumatic brain injury (TBI) is a serious public health concern, especially injuries from repetitive insults. The main objective of this study was to immunocytochemically examine morphological alterations in astrocytes and microglia in the hippocampus 48 hours following a single blast versus multiple blasts in adult C57BL/6 mice. The effects of ketamine and xylazine (KX), two common anesthetic agents used in TBI research, were also evaluated due to the confounding effect of anesthetics on injury outcome. Results

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