LIMBIC CENC

Key Points Summary

DeVoto C, Guedes VA, Lai C, Leete JJ, Mithani S, Edwards K, Vorn R, Qu BX, Wilde EA, Walker WC, Diaz-Arrastia R, Werner JK, Kenney K, Gill JM. Remote blast-related mild traumatic brain injury is associated with differential expression of exosomal microRNAs identified in neurodegenerative and immunological processes. Brain Inj. 2022 Apr 16;36(5):652-661. doi: 10.1080/02699052.2022.2042854. Epub 2022 Mar 24. PMID: 35322723

Primary Question this Study Addresses

What is the relationship between a panel of 798 exosomal microRNAs (exomiRs) and chronic neurobehavioral symptoms in a cohort of Service Members and Veterans with mTBI, both with and without blast exposure?

Study Findings That Add to Our Knowledge

In the blast mTBI group, 34 differentially regulated miRNAs were observed compared to the blunt mTBI group and 28 compared to no TBI controls.

Pathway analyses showed that significantly dysregulated miRNAs in the blast exposure group correlated with inflammatory, neurodegenerative and androgen receptor pathways.

How Study Evidence Might Be Used in Practice

Our findings suggest that chronic neurobehavioral symptoms after blast mTBI may pathomechanistically related to dysregulated cellular pathways involved with neurodegeneration, inflammation and central hormonal regulation.

For more information on TBI and aging:

Resource

To access the study abstract, click here: Abstract

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