

Mild traumatic brain injury diagnosis

[Mild traumatic brain injury](#) (mTBI) remains a challenge to accurately assess with conventional neuroimaging.

The main challenge in the diagnosis lies in the fact that severe [intracranial lesions](#) are often associated with mild head injury, especially in the presence of specific risk factors.

Mild traumatic brain injury biomarkers

One of the main challenges of TBI at present is the lack of specific diagnostic [biomarkers](#), especially for mild TBI (mTBI), which remains currently difficult to value in clinical practice. In this context [MicroRNAs](#) may be important mediators of the profound molecular and cellular changes that occur after TBI in both the short and the long term. Recently, plasma MicroRNAs profiling in human TBI, have revealed dynamic temporal regulation of MicroRNA expression within the cortex. The aim of this study was to select a specific MicroRNAs panel for mTBI, by focusing the research on the prognostic meaning of MicroRNAs in the hours following the trauma, in order to be able to use these MicroRNAs as potential biomarkers useful for monitoring the follow up of mild TBI. Serum levels of 17 MicroRNAs were measured by RT-quantitative polymerase chain reaction (qPCR) in 20 patients with mTBI at three different time-points (0 h, 24 h, 48 h) and in 10 controls. For 15 MicroRNAs they found a significant difference in the comparison among the three-time points: for each of these MicroRNAs the values were greater at baseline and progressively reduced at 24 h and 48 h. These data allow us to consider the MicroRNAs included in a panel as sensitive and specific biomarkers for mTBI, useful in monitoring the post-trauma period ¹⁾.

S100B in mild traumatic brain injury

see [S100B in mild traumatic brain injury](#).

Computed tomography

see [Computed tomography for mild traumatic brain injury](#).

MRI

[Magnetic resonance imaging for Mild traumatic brain injury](#)

References

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Polito F, Famà F, Oteri R, Raffa G, Vita G, Conti A, Daniele S, Macaione V, Passalacqua M, Cardali S, Di Giorgio RM, Gioffrè M, Angileri FF, Germanò A, Aguenouz M. Circulating MicroRNAs expression as

potential biomarkers of mild traumatic brain injury. Mol Biol Rep. 2020 Mar 26. doi:
10.1007/s11033-020-05386-7. [Epub ahead of print] PubMed PMID: 32219772.

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