

## ABSTRACT

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Post-Traumatic Gliomas in Adults: Review of the Case Reports and Studies.

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Traumatic brain injury (TBI) was first proposed as a potential risk factor for developing a glioma in the 1800s, and conditions for establishing a causal relationship between brain injury and gliomas have since been proposed. Given the medical and legal ramifications, the current literature was reviewed to better understand this possible association. Articles that examined the relationship between TBI and glioma formation in adults and were published in English between 1978 and 2022 were reviewed. There were 19 case reports of 25 patients and 16 observational studies. The case reports describe glioma formation at the precise site of prior brain injury in continuity with traumatic scar; the observational studies report conflicting findings, but they largely demonstrate no association. Most of the observational studies are limited by their retrospective nature, but we identified one prospective cohort study which found a positive association. Altogether, we suggest that glioma formation after TBI is a rare occurrence that warrants further study.

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