

Posttraumatic Migraine

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The term *posttraumatic migraine* has been used in several contexts. The purpose of this discussion is to outline the different circumstances in which migraine may follow trauma. Cases from the literature and from the Headache Unit of Montefiore Medical Center are reviewed.

Although trauma may be one of many triggers of migraine, trauma is sometimes the sole or predominant precipitating factor; eg, footballer's migraine. In the posttraumatic syndrome, some exacerbations of headache upon a background of chronic daily headache often fulfill the criteria of migraine. Trauma may trigger the first attack of migraine in a susceptible individual. Biochemical and epidemiologic studies suggest that trauma may be the main etiologic factor of migraine in some cases. Migraine may also follow trauma on the basis of chance.

Differentiating the different types of posttraumatic migraine has diagnostic, therapeutic, and legal implications.

Key words: footballer's migraine, posttraumatic syndrome

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For many years it has been recognized that mild head trauma may be one of many factors that triggers a migraine attack in a migraineur, but this phenomenon would not be termed *posttraumatic migraine*. That term should be reserved for those cases in which trauma is or appears to be a major underlying factor.

The mechanisms of migraine following head trauma are heterogeneous. Trauma may cause a migraine attack by acting as the only or major triggering factor. Migraine may be part of the postconcussion/posttraumatic syndrome. (For simplicity, the term *posttraumatic syndrome* will be used as synonymous with and instead of *postconcussion syndrome*.) Trauma may trigger the first attack of migraine in a susceptible person. Trauma may be a pathogenic mechanism. Finally, migraine may follow trauma on

the basis of chance. Differentiating these "causes" of migraine has diagnostic, therapeutic, and legal implications. Cases are described that help to differentiate the various types of posttraumatic migraine.

TRAUMA AS THE ONLY OR MAIN TRIGGER OF MIGRAINE

This condition was termed *footballer's migraine* by Matthews.¹ He described people who experienced attacks of migraine after heading a soccer ball. Typically, the trauma is not severe; it does not result in loss or alteration of consciousness (unless these symptoms are part of the migraine aura). The vast majority of these cases have migraine with aura. Although in most cases migraine occurs only after mild head trauma, the aura may be dramatic, particularly in children. Focal symptoms such as blindness and generalized symptoms such as confusion and impaired consciousness may occur.²⁻⁵ In some instances, transient neurologic deficits without headache following minor trauma may represent migraine aura without headache. Migraine without aura also may be triggered by mild head injury, but most of these cases are unreported.

Footballer's migraine occurs mainly in children and

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