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# Factors associated with suicidal ideation in patients with cluster headache: a systematic review

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**Introduction**
Cluster headache is a primary headache disorder characterized by severe unilateral pain attacks accompanied by autonomic symptoms and is considered one of the most disabling painful conditions in neurology.

**Objective**
To analyze the main factors associated with suicidal ideation in patients with cluster headache, focusing on clinical, psychological, and psychosocial aspects.

**Methods**
This systematic review was conducted using the PubMed and Virtual Health Library databases, following the PICO strategy. The population included patients with cluster headache, while the exposure factors comprised pain intensity, attack frequency, depression, anxiety, demoralization, and quality of life. The outcome evaluated was suicidal behavior. The search strategy used the descriptors: "Cluster Headache" AND ("Suicide" OR "Suicidal Ideation" OR "Suicidality"). A total of 632 studies were initially identified. After applying the inclusion criteria - studies published within the last five years, available in full text, and written in English - 29 articles were included in the analysis.

**Results**
The studies demonstrated a high prevalence of suicidal ideation among patients with cluster headache, particularly during active headache periods. The main associated factors included greater pain severity, longer disease duration, high attack frequency, increased headache-related disability, and worse functional impairment. Depressive symptoms, anxiety, demoralization, and anticipatory fear of attacks were strongly associated with increased suicide risk, with some studies suggesting that demoralization may be more closely related to suicidal ideation than depression itself. Poor quality of life, greater psychosocial burden, painful comorbidities, and unfavorable socioeconomic conditions were also associated with increased risk. In addition, recent evidence suggests abnormalities in brain regions involved in pain and emotional processing, such as the hypothalamus and limbic system, which may contribute to the greater psychiatric vulnerability observed in these patients.

**Conclusion**
The severe pain associated with cluster headache, together with its functional and psychological burden, contributes to increased psychiatric vulnerability. Furthermore, depression, anxiety, demoralization, and poor quality of life were consistently associated with higher suicide risk. Therefore, mental health assessment and suicide risk screening should be incorporated into the clinical management of these patients, allowing earlier identification of high-risk individuals and more comprehensive therapeutic interventions.

**Keywords:**
Cluster headache
Associated factors
Suicide

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