

## Research Article

# History of Sexual Abuse in Migraine and Chronic Migraine

Torphy B<sup>1\*</sup>, Grossman D<sup>2</sup><sup>1</sup>Diamond Headache Clinic, USA<sup>2</sup>Adler University, USA**\*Corresponding author:** Brad Torphy, Diamond Headache Clinic, Chicago, USA**Received:** July 10, 2015; **Accepted:** August 06, 2015;**Published:** August 08, 2015**Abstract****Background:** Patients with chronic migraine often have a history of physical, emotional, and sexual abuse.**Objectives:** The goal of this study was to assess rates of reported sexual abuse history in chronic migraine and episodic migraine.**Methods:** A retrospective chart analysis was conducted utilizing the medical records of all new patients at a headache clinic during a four-month period. All new patients with a diagnosis of chronic migraine, and migraine with or without aura, were included. A total of 329 migraineurs were included in the review.**Results:** Chronic migraine diagnosis was recorded in 194 patients, and episodic migraine diagnosis was recorded in 135 patients. Significantly more chronic migraine patients self-reported a history of sexual abuse, when compared with episodic migraine patients (15.5% versus 4.4%,  $p < 0.05$ ). Conclusion: A history of sexual abuse may be a contributing factor in the transformation of episodic migraine to chronic migraine.**Keywords:** Migraine; Chronic Migraine; Sexual Abuse, Migraineur

## Introduction

Sexual abuse has been associated with the development of a variety of psychological and physical conditions. Migraine patients often have a history of physical, emotional, and sexual abuse. Psychosocial factors, including traumatic stress, have been shown to be associated with higher rates of headache and higher than expected rates of migraine. Tietjen and colleagues found that 58% of patients seeking treatment at headache clinics had a history of childhood maltreatment, and that 44% of patients with a history of childhood sexual abuse had migraine [1].

It is well documented in the literature that migraine is often comorbid with psychiatric disorders, including anxiety and depression. History of sexual abuse is a known risk factor for mood disorders. Many authors correlate history of sexual abuse and chronic pain, often including, but not limiting the focus to migraine. Rapkin and colleagues concluded that any abuse, either physical or sexual, might promote chronicity of any pain syndrome [2].

Due to bidirectional relationships between chronic pain and anxiety and depression, a neurobiological link has been proposed [3]. The hypothalamic-pituitary-adrenal axis is thought to be dysregulated in patients with anxiety and depression [4], and this could be a factor in the increased incidence of chronic pain conditions in such individuals.

The purpose of this research was to assess the association of a self-reported history of sexual abuse in migraine patients - both chronic migraine and episodic migraine. Furthermore, the authors aimed to determine if there was a greater association of a history of sexual abuse in chronic migraine patients as compared to such a history in episodic migraine patients.

## Methods

A retrospective chart analysis was conducted utilizing the medical records of all new patients at a headache clinic from September 2, 2014 to December 31, 2014. New patient questionnaires, which included a field for history of sexual abuse, were assessed. All new patients with a diagnosis of migraine or chronic migraine were included in the study.

A total of 194 patients with a diagnosis of chronic migraine (defined by International Headache Society criteria as having  $\geq 15$  headache days per month for  $> 3$  months) were included, while 135 patients with a diagnosis of episodic migraine were included. Fourteen new patients were excluded due to no patient questionnaire being on file in the chart. Patient ages ranged from 9 to 77 years, with a mean age of 42.4 years.

## Results and Discussion

A chi-square test was conducted to examine the proportion of chronic and episodic migraineurs who reported a history of sexual abuse. The chi-square test was significant,  $\chi^2(1) = 9.92$ ,  $p < 0.05$ ,  $\phi = 0.17$ . Of the 329 patients included in this study, 10.9% reported a history of sexual abuse across both chronic and episodic migraine. However, only six (4.4%) episodic migraineurs endorsed a history of sexual abuse, whereas thirty (15.5%) patients with chronic migraine indicated a previous history. Patients with chronic migraine were  $3 \frac{1}{2}$  times more likely than episodic migraine patients to report a history of sexual abuse, which represented statistical significance.

As this study was conducted at a headache clinic it would be expected to include more chronic migraine patients; in fact there were 44% more patients with chronic migraine than episodic migraine. In a different clinical environment, such as a primary care or general neurology practice, this proportion would possibly be different,

**Table 1:** Reported sexual abuse history in migraineurs.

	Reported Sexual Abuse History	No Reported Sexual Abuse History
Chronic Migraine Patients	30	164
Episodic Migraine Patients	6	129

but this would not be expected to significantly impact the authors' findings.

A concern with any retrospective self-report study is reporting bias. Studies suggest it is more common to deny abuse than to report that it did happen when it in fact did not [1].

It is likely that underreporting of a sexual abuse history occurred in both patient groups, especially given that the history was taken during the initial office visit. Underreporting is also considered to be very likely when these results are compared with national statistics regarding sexual abuse. The Centers for Disease Control estimated in 2014 that one in four girls and one in six boys are sexually abused before the age of 18, and that 18% of women in the United States have been victims of rape [5].

In this review a reported history of sexual abuse was not further characterized as abuse that occurred during childhood or adulthood, and such a distinction could impact the results. The use of the patient questionnaire rather than interviewing the patients directly is a limitation of this review. A strength of this study is the sample's being composed of consecutive new patients diagnosed with migraine. This serves to minimize selection bias within this population.

These findings suggest that a history of sexual abuse may be an important factor in the transformation of episodic migraine to chronic migraine. Anxiety and depression, which are common in victims of abuse, are factors which are also associated with increased transformation to chronic migraine. Whether a history of sexual abuse has a direct causal relationship in this transformation is unclear; perhaps such a history exacerbates anxiety or depression which, in turn, may lead to transformation to chronic migraine.

Including a patient's history of sexual abuse is important in understanding the various factors which may have led to transformation to chronic migraine. Likewise, uncovering a patient's history of sexual abuse is relevant when formulating a treatment regimen for a patient with episodic migraine or chronic migraine. A migraine patient with such a history, for example, may benefit from antidepressant medication more than from the use of an antihypertensive agent. In addition, perhaps prevention medication should be commenced even earlier in patients with abuse histories. Such patients should be referred for adjunctive treatment, including psychotherapy and biofeedback to help manage the anxiety and

depression which often accompanies a history of sexual abuse. Although psychotherapy is generally recommended for most migraine patients, abused patients may find a particular benefit from such intervention.

Future research is indicated to further establish a link between a history of sexual abuse and migraine. Directions for future work include assessing the impact of childhood sexual abuse on migraine, studying the impact of sexual abuse or assault during adulthood on migraine, and analyzing the effectiveness of psychotherapy in migraine patients who have been victims of sexual abuse.

## Conclusion

History of sexual abuse is more commonly reported in chronic migraine patients as compared to episodic migraine patients. History of sexual abuse can be a contributing factor in the transformation of episodic migraine to chronic migraine. These findings underscore the importance of intervention, such as psychological counseling, in patients who have a history of sexual abuse. Episodic migraine may warrant more aggressive treatment in patients with a history of sexual abuse in order to help prevent transformation to chronic migraine.

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