

Creative Space

Harry Potter and the Curse of Headache

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Headache disorders are common in children and adolescents. Even young male Wizards are disabled by them. In this article we review Harry Potter's headaches as described in the biographical series by JK Rowling. Moreover, we attempt to classify them. Regrettably we are not privy to the Wizard system of classifying headache disorders and are therefore limited to the Muggle method, the *International Classification of Headache Disorders*, 2nd edition (ICHD-II). Harry's headaches are recurrent. Although conforming to a basic stereotype, and constant in location, throughout the 6 years of his adolescence so far described they have shown a tendency to progression. Later descriptions include a range of accompanying symptoms. Despite some quite unusual features, they meet all but one of the ICHD-II criteria for migraine, so allowing the diagnosis of 1.6 *Probable migraine*.

Key words: Harry Potter, ICHD-II, International Classification of Headache Disorders-Second Edition, adolescents, children, Muggles, Wizards

Abbreviation: ICHD-II International Classification of Headache Disorders (Second Edition)

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Harry Potter has suffered recurrent headaches since he was 11 years old (at the time we write this, he is 17). We do not have access to prevalence data for childhood headache disorders in the Wizard population. However, Harry lived entirely amongst Muggles until his 12th year,¹ and has continued to do so during summer vacations. Since Wizards living in the Muggle world may not acknowledge their Wizardry, some have very probably been included in and contributed to epidemiological studies of supposedly Muggle populations. Estimates of 1-year *headache* prevalence in these studies range from 58%² to 80%³ for children and adolescents between the ages of 7 and 15 years, and for *migraine* from 3.6% to 12%.^{2,3}

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As in adults, headache in this age group – and migraine in particular – may have a profound impact on the life of the person affected by it. Ability to concentrate at school,⁴ school performance⁵ and school attendance⁶ may all be adversely affected. In the worst of scenarios, chronic daily headache may see students out of school and dependent upon home study programmes. Headache, therefore, can and not infrequently does impose a substantial burden in childhood.

We understand that Harry did not have headaches before age 11.¹ This is a common age of onset for primary headache disorders, especially migraine. In Harry's case, onset was probably some time prior to puberty since the first evidence of this, according to JK Rowling, his biographer, was apparent when he was 14.⁷ The majority of children have experienced headache from any cause by this time.^{2,3} Fortunately for Harry, his headaches have been relatively few and far between, but there have been periods during which they have rendered him temporarily dysfunctional, so having a significant impact on his life and activities.

The first attack occurred without warning,¹ and all subsequent episodes have done the same. The major and perhaps only trigger is proximity, either physical or legilimental, of Harry's arch enemy, He Who Must Not Be Named. (Well, we shall be brave . . . Lord Voldemort!! There, we said it.) The following conversation took place between Dumbledore, headmaster of Harry's boarding school, and Fudge, the Minister for Magic, in Harry's fourth year at the school:⁷

"I assume that you are referring to the pains Harry has been experiencing in his scar?" said Dumbledore coolly.

"You admit that he has been having these pains, then?" said Fudge quickly. 'Headaches? Nightmares? Possibly – hallucinations?'"

"Listen to me, Cornelius," said Dumbledore . . . 'Harry is as sane as you or I. That scar upon his forehead has not addled his brains. I believe it hurts him when Lord Voldemort is close by, or feeling particularly murderous.'"

This is not an unfamiliar scenario for headache patients: other people unsympathetically deny the biological origin of headache disorders and propose a psychological explanation instead. Indeed, lack of understanding of the nature and impact of headache disorders amongst people generally is a part of the burden of headache. We are not surprised to see it expressed so openly in the Wizard community.

The purpose of this study is to review the nature and characteristics of Harry Potter's headaches and attempt to classify them. As we have been unable to take a history from Harry directly, we rely upon Rowling's helpful descriptions in her biographical series. Further, because none of us admits to being a Wizard or Witch, we necessarily depend upon Muggle methodology. The established Muggle system for classifying headaches is the *International Classification of Headache Disorders*, 2nd edition (ICHD-II).⁸

METHODS

Our senior author (HT) carefully reviewed all 6 volumes published to date of Harry Potter's biography. She notated and provided the junior authors (FS and TS) with verbatim descriptions of Harry's headaches. We set some of these out below, and use them to discuss issues related to classification.

RESULTS AND DISCUSSION

The first book of Rowling's series records Harry's life from shortly before his 11th birthday and during most of the following year.¹ Only brief episodes are described of Harry's life before then but, from these, we can infer that an important factor in the causation of his headaches was trauma. An attempt by Voldemort to kill Harry as an infant left him with an erythematous frontal scar in the shape of a lightning bolt, which the book cover illustration shows to be just above the medial part of the left orbit. Unfortunately, this is in the distribution of the first division of the trigeminal nerve,¹⁰⁻¹³ the locus of several painful headache disorders including but not limited to migraine, cluster headache, paroxysmal hemicrania, short-lasting unilateral neuralgiform headache with conjunctival injection and tearing (SUNCT), primary stabbing headache and classical trigeminal neuralgia. Harry's headaches have invariably been at this site.

Given this origin, it is immediately tempting to classify these headaches as 5.2.1 *Chronic post-traumatic headache attributed to moderate or severe head injury*.⁸ No similar trauma (the Avada Kedavra Curse) is known in the Muggle world but, as the ICHD-II criteria for post-traumatic headache do not specify the nature of the trauma, this is not a difficulty. Headache of this type has "no typical characteristics,"⁸ a feature of ICHD-II that is controversial. If, for example, headache that otherwise satisfies the criteria for any subtype of migraine develops for the first time in close temporal relation to head trauma, it is considered a secondary headache attributed to the trauma and not classified as migraine. ICHD-II insists, however, that chronic post-traumatic headache has its onset within 7 days of the trauma, whereas Harry's headaches did not manifest until a decade later. Therefore, they *cannot* be classified as post-traumatic headache, which opens the door to classifying them according to their phenotypic characteristics. For this purpose we looked at more detailed descriptions of the headaches.

HEADACHE DESCRIPTION 1

"Then a pain pierced his head like he'd never felt before, it was as though his scar was on fire – half blinded, he staggered backwards . . . The pain in

Harry's head was so bad he fell to his knees. It took a minute or two to pass."¹

Unilateral supra-orbital pain with the characteristics of sudden onset, extreme intensity and duration of a minute or 2 suggests but does not fully meet the criteria for 4.1 *Primary stabbing headache*.⁸ Previously used terms for this disorder include "ice-pick pains" and "jabs and jolts."¹⁴ ICHD-II describes it as "transient and localized stabs of pain in the head that occur spontaneously in the absence of organic disease of underlying structures or of the cranial nerves."⁸ So far so good. The stabs are "exclusively or predominantly felt in the distribution of the first division of the trigeminal nerve." This also fits. However, "stabs last up to a few seconds and recur with irregular frequency ranging from one to many per day." This headache did not fulfill this criterion (and all criteria must be met for the diagnosis to be made) because it lasted "a minute or 2" and did not recur in the way described.

Another possibility is trigeminal neuralgia. Descriptively, the pain of 13.1.1 *Classical trigeminal neuralgia* – "intense, sharp, superficial or stabbing" and "stereotyped in the individual patient"⁸ – matches Harry's reasonably well. It may be evoked from specific and often highly localized trigger areas within the distribution of the trigeminal nerve by a variety of tactile stimuli, and also may occur spontaneously. It is abrupt in onset and termination, and may last seconds or minutes. While it usually affects the second or third divisions of the trigeminal nerve, it can occur in the first division, albeit in less than 5% of cases. This episode appeared to meet all these criteria. Nevertheless, Harry's age and gender make this diagnosis highly unlikely, and we shall not consider it further.

HEADACHE DESCRIPTION 2

"At once, a needle-sharp pain seared across Harry's scar; his head felt as though it was about to split in two; he yelled, struggling with all his might, and to his surprise, Quirrell let go of him. The pain in his head lessened."¹

This second episode, days later, of sudden-onset unilateral supra-orbital pain, needle-like this time and lasting probably less than a minute, again suggests primary stabbing headache. As before, the single occurrence rather than repeated stabs of pain makes

this diagnosis unlikely. Instead, given a second similar episode, which must now be viewed as side-locked, we should consider the possibility of structural pathology: "When [the stabs] are strictly localized to one area, structural changes at this site and in the distribution of the affected cranial nerve must be excluded."⁸ Rowling makes no mention of Harry's undergoing structural or functional imaging (or their Magical equivalents), so we must assume none of these was done. There is, of course, a known structural lesion (the scar), but not of the sort that might secondarily give rise to this type of headache. Since Harry has gone on for 5 more years without neurological sequelae, we presume that other structural pathology is absent.

Although it was not apparent at the time, this description reveals the major trigger factor for Harry's headache: the proximity of Voldemort (the evil lord was incapable then of independent corporeality; Quirrell, one of Harry's teachers, was body-sharing with him). Although this might seem unusual as a feature of all types of Muggle headache, Harry probably – consciously or subconsciously, but certainly correctly – perceives this as a serious threat to his wellbeing. In that sense, it is a situation of acute stress, a recognized trigger for both migraine and episodic tension-type headache.

HEADACHE DESCRIPTION 3

"And then, without warning, Harry's scar exploded with pain. It was agony such as he had never felt in all his life; his wand slipped from his fingers as he put his hands over his face; his knees buckled; he was on the ground and he could see nothing at all; his head was about to split open. . . . The pain in his scar reached such a pitch that he retched, and then it diminished. . . ."⁷

Here once more was abrupt onset of pain, in the same location, with rapid escalation to peak intensity. The term "exploded with pain" is suggestive. Subarachnoid haemorrhage is by far the most common cause of intense and incapacitating headache of abrupt onset (thunderclap headache)⁸ and the ICHD-II diagnosis 6.2.2 *Headache attributed to subarachnoid haemorrhage* must be considered. It can immediately be rejected because of the previous similar episodes without consequence. Recovery from this one, as from the others, was rapid and complete.

The diagnosis 4.6 *Primary thunderclap headache* may be considered once subarachnoid haemorrhage is ruled out. This is a “high-intensity headache of abrupt onset mimicking that of ruptured cerebral aneurysm.”⁸ However, ICHD-II goes on to remark: “Evidence that thunderclap headache exists as a primary condition is poor.” This makes this an unsatisfactory diagnosis, and we should look for one that is more accepted.

Harry was 14 when this attack occurred, and there is evidence of worsening of his headaches over the years, the pain being more intense than before. Harry was greatly disabled by this headache, dropping his wand and collapsing. Furthermore, this time there were accompanying symptoms, including retching – the first suggestion of nausea – and, apparently, visual obscuration. Nausea as an accompanying symptom has strong predictive value for migraine.¹⁵ The progression here was pain, acute disability (possibly weakness), visual loss, escalating pain, nausea and retching and, finally, pain relief. All these are symptoms perhaps of 1.2 *Migraine with aura*. Vomiting often leads to diminution of pain in migraine. But, whilst thunderclap headache can be part of migraine, all of this occurred within minutes. The duration both of this and of earlier episodes argues against this diagnosis. Even though migraine attacks are often shorter-lasting in children, less than one hour would not meet the ICHD-II criteria for this disorder.⁸

Primary stabbing headache is more likely to occur in people with migraine, in which case it is felt in the site habitually affected by migraine.⁸ But symptoms such as nausea and visual disturbances are not described in primary stabbing headache or classical trigeminal neuralgia. Accompanying nausea also excludes 2.2 *Frequent episodic tension-type headache*, otherwise a candidate diagnosis, the disorder being described as “episodes of headache lasting minutes to days.”⁸ The disabling intensity of pain makes this an unlikely diagnosis, but ICHD-II is clear that there is no nausea with this headache.

HEADACHE DESCRIPTIONS 4-6

Rowling provides several further descriptions of headaches at this time, as Harry finds himself in the presence of the fully re-embodied Voldemort:

“The scar on Harry’s forehead seared with a sharp pain again . . . and [he] thought his head would burst with the pain.”⁷

Then, under the Cruciatus Curse (which of course has no Muggle correlate):

“It was pain beyond anything Harry had ever experienced . . . his head was surely splitting along his scar; . . . he wanted it to end . . . to black out . . . to die . . . And then it was gone.”⁷

Soon after:

“His head was surely going to burst with pain, he was screaming more loudly than he’d ever screamed in his life. And then it stopped. Harry . . . was shaking uncontrollably.”⁷

These pains, of sudden onset, lasting many minutes – rather longer than those previously – and described as “searing” or “splitting,” were of such intensity that death would be a welcome relief. Pain so excruciating is much more characteristic of the trigeminal autonomic cephalalgias, especially 3.1 *Cluster headache*.⁸ This is a disorder recognized to be associated occasionally with suicidal ideation. Trigeminal autonomic cephalalgia is also suggested in the following.

HEADACHE DESCRIPTION 7

“His scar seared and burned . . . the pain of it was making his eyes stream . . .”⁹

This, when Harry was 15, is the first mention of accompanying *autonomic* symptoms. A streaming eye is a prominent feature of cluster headache, paroxysmal hemicrania and, especially, SUNCT.⁸ But the temporal pattern of Harry’s headaches rules out any of these frequently recurring headaches. Further, in all trigeminal autonomic cephalalgias, lacrimation is a strictly unilateral phenomenon whereas the description given here clearly implies bilaterality. Watering eyes can be a feature of migraine too, the symptoms of which are by no means always unilateral.

HEADACHE DESCRIPTIONS 8 AND 9

“Harry laughed again because he knew it would incense her, the pain building in his head so badly he thought his skull might burst.”⁹

“His forehead hurt terribly . . . it was aching fit to burst. He opened his eyes . . . he felt as though a white-hot poker were being applied to his forehead . . . He

clutched his head in his hands; the pain was blinding him . . . he rolled right over and vomited over the edge of the mattress.” And soon after: “The pain in his forehead was subsiding slightly . . . He retched again . . . feeling the pain recede very slowly from his scar.”⁹

These are both from Harry’s 16th year. What bears mentioning is that, for the first time, the pain is described as “building.” Harry’s laughter may have been bravado, but the fact that he could laugh indicates pain at the time that, whilst bad, was not incapacitating. In the first 2 descriptions and, particularly, the third, it had been agonising within seconds of onset. Perhaps, too, in description 8, there is an indication of more holocranial pain. In description 9 there are further important new features. Harry awakened with established headache. The pain caused him actually to vomit, which apparently brought relief. All of these features are more suggestive of migraine than earlier accounts.

CONCLUSIONS

Harry Potter has suffered, since age 11, recurrent short-lasting episodes of very intense and disabling headache, always with their focus in the same frontal location. Initially there were no accompanying symptoms but, as he became older, nausea, vomiting, visual obscuration and lacrimation all featured in attacks but not in a stereotypical manner.

We assume, given their identical location, that all Harry’s headaches reflect a common process. Migraine is the most likely diagnosis of recurrent unilateral severe headache causing disability and accompanied by nausea and vomiting. We are uncertain about the possibility of aura, but the criteria for ICHD-II diagnosis 1.1 *Migraine without aura* are⁸:

- A. At least 5 attacks fulfilling criteria B-D
- B. Headache attacks lasting 4-72 hours* (untreated or unsuccessfully treated)
- C. Headache has at least 2 of the following characteristics:
 - 1. unilateral location
 - 2. pulsating quality
 - 3. moderate or severe pain intensity

- 4. aggravation by or causing avoidance of routine physical activity (eg, walking or climbing stairs)

D. During headache at least 1 of the following:

- 1. nausea and/or vomiting
- 2. photophobia and phonophobia

E. Not attributed to another disorder.

*In children, attacks may last 1-72 hours.

Assuming Harry’s attacks are expressions of a primary headache disorder, and we have not found evidence of another potentially causative disorder, only the criterion for duration is not met while other possible diagnoses are much less likely. Migraine may be a genetic disorder (we know very little, incidentally, of the medical history of Harry’s parents, both of whom had Magical powers), but it is well recognized that trauma can cause migraine to manifest (so-called “footballer’s migraine”). It is commonplace that, in children, migraine does not have quite the same pattern as in adults, and the full set of features may take some years to establish themselves so that the diagnosis becomes clear. However, the close temporal relation, in several of the descriptions, between attacks (in terms of both onset and resolution) and the proximity of Voldemort still suggests this is in fact a secondary headache disorder manifesting with migrainous features. This possibility needs to be tested by final removal of the presumed cause: resolution following removal of the cause is an important diagnostic criterion for almost all secondary headaches.⁸ We keenly await Rowling’s next book to see if this situation will come about.

Meanwhile, rather than fall back on 14.1 *Headache not elsewhere classified*, described as “headache with characteristic features suggesting that it is a unique diagnostic entity [that] does not fulfill criteria for any of the headache disorders described,”⁸ we can offer 1.6 *Probable migraine*. This is a diagnostic refuge for headache that appears to be migraine but obstinately fails to meet one (and only one) of the criteria for that diagnosis. Rowling provides many accounts of unexpectedly rapid recovery from illness or injury in Wizards, as Magical powers are brought to bear. Perhaps it is not surprising that a classification constructed by

Muggles (as we assume the chairman and members of the IHS classification subcommittee to be) failed to consider this.

That even a young male Wizard has recurrent disabling headache is a reflection of the wider problem of headache in children and adolescents. In the Muggle world, the burden of child and adolescent headache is of under-recognized importance; as in adults, it is very often under-treated. We applaud the efforts of the paediatric subcommittees of both the International Headache Society and the American Headache Society to raise awareness of these issues, and appeal for assistance to the world of Magic. Headache need not be a curse for Muggles or Wizards: it can be lifted with research, better to understand it, and education, better to manage it.¹⁶

Conflict of Interest: None

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