Our patients‘ headache narratives

Comparative analysis of verbal headache description in clinical consultations with ICHD-3-criteria

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Background

Diagnosis of primary headache disorders relies on patient history, including pain description, and follows the criteria of the International Classification of Headache Disorders, 3rd edition (ICHD-3). Because pain experiences and their verbal expression are highly individual, this study aimed to characterize our patients‘ headache narratives through a qualitative analysis of patient–physician interactions during headache consultations and to examine how these narratives relate to the descriptors included in the ICHD-3.

Methods

This analysis is part of ComPAIN (Communication about pain in patients with headache), a prospective, cross-sectional study at the University Hospital of Zurich (UZH). Audio and video recordings of headache consultations were transcribed and analyzed using directed content analysis, linguistically informed analysis of pain description, and conventional content analysis. Descriptions of migraine and tension-type headache (TTH) were compared to the International Classification of Headache Disorders 3rd edition (ICHD-3). Fischer’s exact tests (α=0.05) were used to assess associations between headache type and categorical variables.

Results

29 patients attending their first consultation at the Headache Ambulatory Unit of the USZ between August 2021 and May 2023 were included; 22 (75.9%) were diagnosed with migraine and 11 (37.9%) with TTH. Migraine patients most frequently used *drückend [pressing]*, *pulsierend [pulsating]*, and *stechend [stabbing]* for pain quality; *wechselhaft [changing]* for pain dynamics; and *stark [strong]* for pain intensity. TTH patients most frequently used *drückend [pressing]* for pain quality; *konstant [constant]* and *andauernd [continuous]* for pain dynamics; and *stark [strong]* and *moderat [moderate]* for pain intensity. Content-related representation revealed a significant difference in pain dynamics, present in migraine but absent in TTH (Table 1). Unilateral pain was significantly associated with migraine, although 70.6% of migraine patients also reported bilateral pain (Table 2).

Pain dynamics in migraine and TTH[1]

	MIG n (%)	**TTH** n (%)	*p-value*
all / valid values	16	7	
dynamic pain	12 (75)	1 (14.3)	***0.019***
invariable pain	2 (12.5)	6 (54.5)	***0.045***

Pain location in migraine and TTH

	MIG n (%)	**TTH** n (%)	*p-value*
all / valid values	17	6	
dynamic pain	12 (70.6)	6 (100)	*0.27*
invariable pain	10 (58.8)	0 (0)	***0.019***

[1] Dynamics in regard to pain quality, location, intensity
MIG: migraine; TTH: tension-type headache

Conclusion

A. Description of migraine and TTH was more diverse and differed from the classification criteria according to ICHD-3.

B. Migraine headaches were significantly associated with pain dynamics, while TTH were significantly associated with the opposite, low temporal variability.

C. Pain dynamics are not yet incorporated into the ICHD-3 criteria, but they may represent an additional feature for assessing headache pain that is less dependent on individual language use and can be derived from open headache descriptions.



Future Perspectives:
Decoding Headaches in Digital Helvetia (DHDH)

Building on the insights of this pilot study, the project DHDH was launched as a DIZH-funded initiative. Using methods from linguistics and digital language analysis, the project team aims to close the gaps between communications in the hospital setting and pain expression in the digital world. More information: *https://www.dizh.uzh.ch/en/2025/05/12/dhdh-2/*

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