



Letter to editor

Could scalp pain be a type of unclassified headache?

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Dear Editor,

The scalp is the structure that covers the skull, from the upper nuchal lines of the occipital bone to the supraorbital margins of the frontal bone, but also extends downward toward the zygomatic arch and external auditory canal. It is not limited to the skin from which the hair grows on the top of the head (1).

Anatomically, the scalp is made up of five layers: the skin, the most superficial layer and rich in sweat and sebaceous glands, as well as many hair follicles; (2) subcutaneous tissue, thick, fibrous layer that is highly vascularized and innervated; (3) epicranial aponeurosis or aponeurotic galea, corresponds to the aponeurosis of the occipitofrontal muscle; (4) loose connective tissue, a spongy layer of connective tissue; and (4) pericranium or periosteum, the deepest layer responsible for externally covering the skull. In practice, the scalp is made up of the three most superficial layers (skin, subcutaneous tissue and epicranial aponeurosis) (1).

The innervation of the scalp comes from the trigeminal nerve branches: ophthalmic (supratrochlear and supraorbital nerves), maxillary (zygomaticotemporal branch) and mandibular (auriculotemporal nerve), but receives contributions from the cervical plexus (lesser occipital nerve) and dorsal branches of the spinal cord nerves cervical (greater occipital nerve and third occipital nerve) (1).

Since the 1960s, there has been a symptom called trichodynia that refers to scalp pain associated with hair loss. During the COVID 19 pandemic, this complaint became more common, as acute telogen effluvium following this infection was accompanied by trichodynia (2). There is another term related to scalp hypersensitivity called trichokinesis, described as burning pain. This symptom predominates in women with psychiatric disorders, such as depression and anxiety, in the absence of scalp diseases.

The scalp is a region commonly affected by painful processes resulting from infestations, infectious or inflammatory diseases. This pain located in the scalp cannot be called trichodynia. It does not present well-defined clinical characteristics and is not yet included in the ICHD-3 diagnostic criteria. ICHD-3 group 11.9 describes headaches attributed to skull disorders, possibly referring to bone changes, but does not describe any scalp lesions (3).

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Only trichodynia and trichokinesia are described as scalp pain, but neither of these symptoms is classified as a headache. However, there are different etiologies and pathophysiological mechanisms for the emergence of scalp pain. Neuropeptides are possibly involved, including CGRP, which is found in the skin and is a fundamental link between the central nervous system, immune system and microvascular system of the skin (4).

As scalp pain is a very common and little studied symptom, leading to different approaches by neurologists and dermatologists, we suggest its inclusion in ICHD-3 as a headache attributed to a scalp disorder.

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References

1. Rukwied R. Physiologie der Kopfhaut. *Der Hautarzt*. 2017;68(6):431-6. Doi 10.1007/s00105-017-3959-7
2. Trüeb RM, Starace MVR, Piraccini BM, Rezende HD, Reis Gavazzoni Dias MF. Trichodynia Revisited. *Skin Appendage Disorders*. 2021;7(6):449-53. Doi 10.1159/000517463
3. Headache Classification Committee of the International Headache Society (IHS) The International Classification of Headache Disorders, 3rd edition. *Cephalalgia*. 2018;38(1):1-211. Doi 10.1177/0333102417738202
4. Reich A, Medrek K, Adamski Z, Szepietowski J. Itchy Hair – Trichoknesis: A Variant of Trichodynia or a New Entity? *Acta Dermato Venereologica*. 2013;93(5):591-. Doi 10.2340/00015555-1543