Classification of headaches

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Headache in adults: 1-year prevalence

Population or community-based surveys of >500 participants covering ages 25-60 y

Region	Prevalence
Africa	**21.6** (2 studies)
Asia	**58.6** (5 studies)
Australia	**50.0** (1 study)
Europe	**56.1** (8 studies)
N. America	**53.5** (3 studies)
S. America	**41.3** (4 studies)

Mean: 50.5
Median: 50

World Headache Maps

Slide 1

Cephalalgia
An International Journal of Headache

The International Classification of Headache Disorders
2nd Edition

Headache Classification Subcommittee of the International Headache Society

Blackwell Publishing

Headache Classification Committee, 2002

- The single most important document to read for doctors taking an interest in the diagnosis and management of headache patients.

- It is intended equally for research and clinical practice.

- It is summary of everything that we know about headaches.

- Based largely on the principles of the first edition of ICHD, 1988.

- 160 pages, about 200 diagnosis

Slide 2

- Classify:
  to recognize the different entities
  to order in a meaningful fashion

- Available evidence:
      clinical description
      longitudinal studies
      epidemiological studies
      treatment results
      genetics
      neuroimaging
      pathophysiology

- The classification would certainly change with increase of our knowledge.

Do we have to know ICHD-II by heart?

Even members of the Headache Classification Subcommittees are unable to remember all of it.

(from the introduction of ICHD-II)

ICHD-II is hierarchically organized

	Primary headaches:
1.	Migraine
2.	Tension-type headache
3.	Cluster headache and other trigeminal autonomic cephalalgias
4.	Other primary headaches
5-12.	Secondary headaches
13.	Cranial neuralgias and central causes of facial pain
14.	Other headache, cranial neuralgia, central or primary facial pain
	Appendix

ICHD-II is hierarchically organized – 3 (4) digit levels

Group		Primary headache	
Type	1	Migraine	1^0
Subtype	1.1	Migraine without aura	2^0
	1.2	Migraine with aura …	
Subform	1.2.1	Typical aura with migraine headache	3^0
	1.2.2	Typical aura with non-migraine headache	
	1.2.3	Typical aura without headache…	

1^0 or 2^0 Primary care physician
3^0 or 4^0 Neurologist, headache expert

The ICHD-II codes correspond to the ICD-10 codes

ICHD-II code	ICD-10 code	Diagnosis
1.	G43	Migraine
1.1	G43.0	Migraine without aura
1.2	G43.1	Migraine with aura
1.2.5	G43.105	Sporadic hemiplegic migraine
4.7	G44.80	Hemicrania continua

• In many places ICHD-II code is more detailed than ICD-10 code.

• Some headache types are not uniquely coded under the ICD-10 system but the most appropriate ICD-10 code has in each case been attached to the ICHD-II code.

The headache diagnosis is based on:

• Symptoms
primary headache disorders

• Etiology
secondary headache disorders

ICHD-II content

One chapter – one headache's type

The chapter:
• the classification for that chapter
• introduction
• different headaches, one by one, in the order of classification
• selected bibliography

For each major headache disorder, there are:
• previously used terms
• related disorders coded elsewhere in the ICHD-II
• short description
• *explicit* diagnostic criteria
• written comment

explicit – unambiguous, precise and with as little room for interpretation as possible

How to use ICHD-II

- Patients receive a diagnosis according to headache phenotypes that they currently present or that they have presented within the last year.

- Each distinct type of headache that the patient has must be separately diagnosed and coded.

> 1.1 Migraine without aura
> 2.2 Frequent episodic tension-type headache
> 8.2 Medication-overuse headache

- Listed in the order of importance to the patient
(not to the doctor!)

How to use ICHD-II

- If one type of headache in a particular patient fulfils two different sets of explicit diagnostic criteria, then all other available information should be used to decide which of the alternatives is the correct or more likely diagnosis.

> longitudinal headache history
> family history
> effect of drugs
> menstrual relationship
> age, gender

- Description of untreated or unsuccessfully treated attack

- Probable diagnostic category

How to use ICHD-II

- If there are different types of headaches in a particular patient

The attacks are NOT different
Typical attacks ≈ diagnosis
Typical + atypical ≈ frequency

The attacks are different
Headache diary

- There is no possibility to code the frequency or severity of headaches. The recommendation is to specify that in free text.

How to use ICHD-II

Primary or secondary headache

- New headache in close temporal relationship to
    + another disorder that is known cause of headache

    The diagnosis is SECONDARY headache, even if it is

        migraine-like headache,
        tension-type – like headache or
        cluster-like headache.

How to use ICHD-II

Primary or secondary headache

- **Pre-existing primary headache** is made worse
    + another disorder that is known cause of headache

  One diagnosis: the PRIMARY headache disorder or
  Two diagnosis: the PRIMARY headache and the SECONDARY
                headache according to the other disorder

- close temporal relationship
- marked worsening of the headache
- good evidence of causal relationship
- improvement or disappearance of headache after relief of "cause"

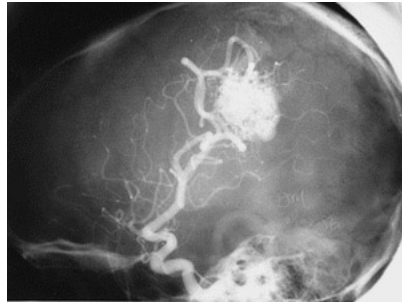## Our case as an example

M.L., female, 42 years

- Migraine without aura, 2/m, from her twenties

- Gradual increase in headache frequency, 4-5/m, from 37 year

- Normal results on physical and neurological examinations.

Our case as an example

• CT brain scan was performed and revealed the tumor-like zone in temporal and parietal region on the left.

• DSA: Arteriovenous malformation

Our case as an example

   Migraine without aura or
   Migraine without aura and Headache secondary to AVM

• close temporal relationship?
• marked worsening of the headache?
• good evidence of causal relationship

Causality or comorbidity

In our case the removal of AVM resulted in headache disappearance, and we concluded the diagnosis of secondary headache disorder.

• improvement or disappearance of headache after relief of "cause"

ICHD-II - Appendix

• "orphan headaches" - novel entities that have not been sufficiently validated by research studies

> *Menstrual migraine*
> *SUNA*
> *Nummular headache*

• Alternative sets of diagnostic criteria to those in the main body of classification

• The first step in eliminating disorders included as diagnostic entities because of tradition, but without sufficient evidence

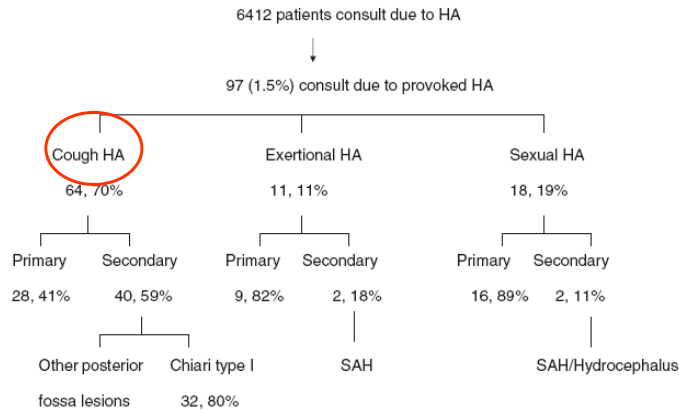> *alternating hemiplegia of childhood*

ICHD-II is 8 years old, now…

• There is a lot of new studies testing the ICHD-II in clinical practice

• New proposals for revision the criteria

The MOH diagnosis should no longer request improvement after discontinuation of medication overuse but should be given to patients if they have a primary headache plus ongoing medication overuse.

The chronic migraine diagnosis should no longer request ≥ 15 days with migraine but should be given to patients with ≥ 15 days of headache of which only 8 (or only 4) is migraine.

Headache Classification Committee 2006,
Diener et al. 2007, Zeeberg et al. 2009

4. Other primary headaches

6412 patients consult due to HA

↓

97 (1.5%) consult due to provoked HA

Cough HA	Exertional HA	Sexual HA
64, 70%	11, 11%	18, 19%

Primary	Secondary	Primary	Secondary	Primary	Secondary
28, 41%	40, 59%	9, 82%	2, 18%	16, 89%	2, 11%

Other posterior fossa lesions | Chiari type I 32, 80% | SAH | SAH/Hydrocephalus

*Pascual et al. 2008*

Cluster headache and paroxysmal hemicrania: differential diagnosis

J Zidverc-Trajkovic, AM Pavlovic, M Mijajlovic, Z Jovanovic, N Sternic & VS Kostic
Department of Cerebrovascular Disorders and Headache, Institute of Neurology, Clinical Centre of Serbia, Belgrade, Serbia and Montenegro

Table 2 Features of headache attacks in patients with cluster headache (CH) and paroxysmal hemicrania (PH)

Headache features	CH (54)	PH (8)	P-value
Ocular pain localization, n (%)	34 (63.0)	1 (5.12)	0.017
Duration of attacks (min) ± SD	80.0 ± 57.45	7.87 ± 6.64	0.000
Range	15–240	1.5–20	
Frequency of attacks/24 h ± SD	2.73 ± 2.29	7.00 ± 7.4	0.003
Range	0.5–10	0.5–25	
Tenderness between attacks, n (%)	17 (31.5)	1 (12.5)	0.418
Nocturnal attacks, n (%)	34 (63.0)	4 (50.0)	0.700
Nocturnal attack predominance, n (%)	14 (26.0)	0 (0.0)	0.181
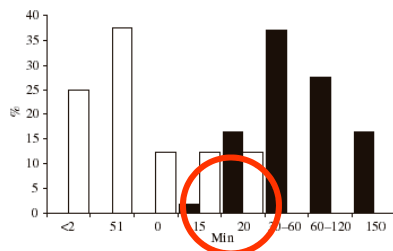
Figure 1 Duration of attacks (%). ■, CH; □, PH.
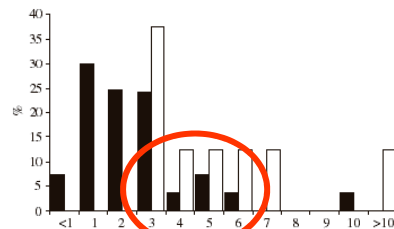
Figure 2 Frequency of attacks. ■, CH; □, PH.

When to use ICHD-II?

We have to know diagnostic criteria for:

      migraine with and without aura
      tension-type headache
      cluster headache

It is also useful to recognize medication-overuse.

We will use ICHD-II:
- For uncertain diagnosis in clinical practice
- To be sure that all patients in examined group satisfy diagnostic criteria for headache disorder that we would like to study.