5th Congress of the European Academy of Neurology

Oslo, Norway, June 29 - July 2, 2019

Teaching Course 7

Acute headache treatment (Level 1)

Red flags and the role of investigations

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Rehabilitation und Prävention

Schweizerische Kopfwehgesellschaft
Société suisse pour l'étude des céphalées
Società svizzera per lo studio delle cefalee
Societad svizra per il studi del mal il tgau
Swiss Headache Society

University of Zurich[UZH]

ean european academy of neurology

TC Teaching Course 7 | 15:00 - 18:15 | Sor Norge

Acute headache treatment (Level 1)

Red Flags and the Role of Investigations

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Agenda

Cases
Quiz

TC Teaching Course 7 15:00 - 18:15 Sor Norge

Acute headache treatment (Level 1)

Chairperson

Anish Bahra, London, United Kingdom

Presentations

Management in the emergency room
Anne Donnet, Marseille, France

Red flags and the role of investigations
Andreas Gantenbein, Bad Zurzach, Switzerland

Treatment of acute attacks
Anish Bahra, London, United Kingdom

Self-management of acute headaches
Charly Gaul, Königstein, Germany

In this TC, participants will learn how to treat acute attacks according to evidence and guidelines. This refers first to the emergency room, where sudden appropriate therapy is necessary. Very important is the correct strategy, when further investigations such as neuroimaging or neurophysiology are needed and when to avoid these investigations. Then, the different drug classes which are helpful in acute attack treatment will be reviewed. Finally, self-management plays an important role. Patients can be advised how to self-treat their headache attacks according to evidence. This TC is for clinicians and trainees who are not specialized in headache but are looking for more advice how to treat and advice patients in the outpatient clinic and in the emergency room.

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https://www.ichd-3.org/

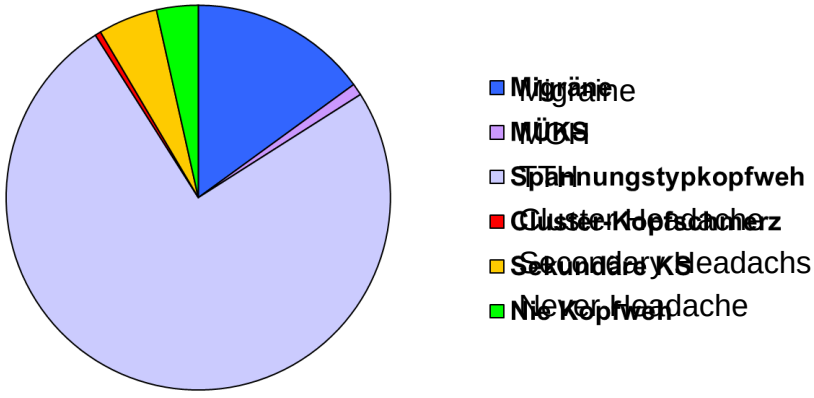
primary vs. secondary

14 groups

> 200 different headache diagnoses

IHS. Cephalalgia 2018

Estimated Headache Prevalence in the Population



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Case I

A.A. 1942

JL Selbstzuweisung. Der Patient berichtet über plötzlich aufgetretene, mittelstarke, drückende, im Verlauf etwas zunehmende Kopfschmerzen (ohne Ausstrahlung, ohne Begleiterscheinungen) rechts temporal gegen 08:30 Uhr heute morgen (23.03.2010), die einige Minuten angehalten hätten. Dann gegen 08:45 Uhr erneute Kopfschmerzen nosologisch ähnlich und ebenfalls nach einigen Minuten regredient. Um 09:00 Uhr seien dann plötzlich (im Bereich von Sekunden) stärkste (VAS 10/10) stechende Koppfschmerzen temporal rechts aufgetreten, mit Ausstrahlung nach rechts okzipital. Gleichzeitig habe der Patient einen Schweissausbruch bekommen und einen ungerichteten Schwindel verspürt, die Augen hätten getränt. Ausserdem hätte er im Verlauf (nach ca. 15 min) ein Kribbel- und Taubheitsgefühl um den rechten Mundwinkel und in den rechten Fingerspitzen verspürt, welche sich über 3-4 Minuten nach proximal ausgebreitet habe und er habe bemerkt, dass er mit der rechten Hand weniger fest habe zudrücken können. Die Symptomatik habe insgesamt etwa 1 Stunde angehalten und sei dann (bis auf ein leichtes Kribbeln um den rechten Mundwinkel) komplett regredient gewesen. Früher habe der Patient noch nie Kopfschmerzen gehabt.

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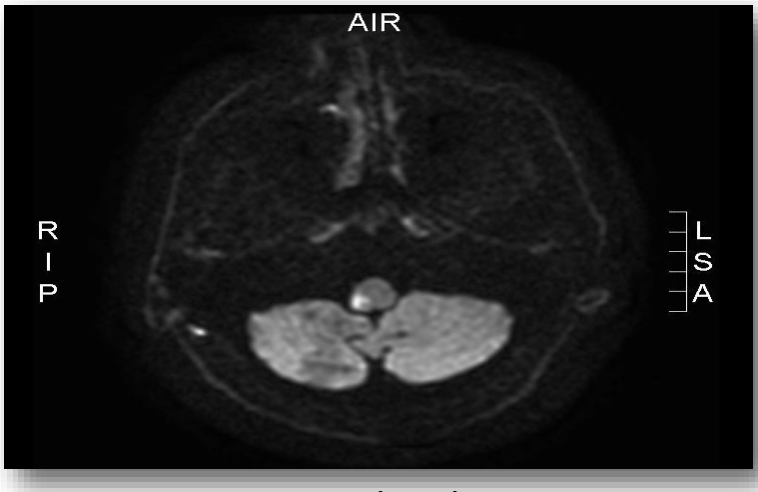

cMRI (DWI)

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Evolution of SNOOP

Systemic Symptoms:	fever, weight loss
Neurologic Symptoms:	pathological findings
Onset, *Ongoing*:	sudden onset
	Valsalva, manipulation
	ongoing
Older:	begin > age 50
Previous, *Postural*:	different from previous
	postural changes

adapted from Dodick DW. Adv Stud Med 2003

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SNNOOP10

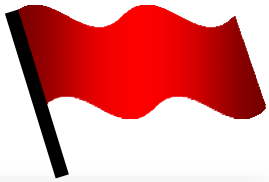

Table 1 SNNOOP10 list of red and orange flags

	Sign or symptom	Related secondary headaches (most relevant ICHD-3b categories)
1	Systemic symptoms including fever	Headache attributed to infection or nonvascular intracranial disorders, carcinoid or pheochromocytoma
2	Neoplasm in history	Neoplasms of the brain; metastasis
3	Neurologic deficit or dysfunction (including decreased consciousness)	Headaches attributed to vascular, nonvascular intracranial disorders; brain abscess and other infections
4	Onset of headache is sudden or abrupt	Subarachnoid hemorrhage and other headaches attributed to cranial or cervical vascular disorders
5	Older age (after 50 years)	Giant cell arteritis and other headache attributed to cranial or cervical vascular disorders; neoplasms and other nonvascular intracranial disorders
6	Pattern change or recent onset of headache	Neoplasms, headaches attributed to vascular, nonvascular intracranial disorders
7	Positional headache	Intracranial hypertension or hypotension

Do TP et al. Neurology 2019

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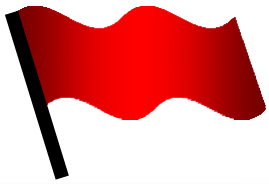
SNNOOP10



8	Precipitated by sneezing, coughing, or exercise	Posterior fossa malformations; Chiari malformation
9	Papilledema	Neoplasms and other nonvascular intracranial disorders; intracranial hypertension
10	Progressive headache and atypical presentations	Neoplasms and other nonvascular intracranial disorders
11	Pregnancy or puerperium	Headaches attributed to cranial or cervical vascular disorders; postdural puncture headache; hypertension-related disorders (e.g., preeclampsia); cerebral sinus thrombosis; hypothyroidism; anemia; diabetes
12	Painful eye with autonomic features	Pathology in posterior fossa, pituitary region, or cavernous sinus; Tolosa-Hunt syndrome; ophthalmic causes
13	Posttraumatic onset of headache	Acute and chronic posttraumatic headache; subdural hematoma and other headache attributed to vascular disorders
14	Pathology of the immune system such as HIV	Opportunistic infections
15	Painkiller overuse or new drug at onset of headache	Medication overuse headache; drug incompatibility

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Case II

Pupil, age 17

- Weakness in the left arm, spreading towards shoulder over 30 min
- After 1 hour severe pulsating headache on the right accompanied by nausea
- Mild photo- and phonophobia

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Case II

Neurological Examination

- Discrete arm drop left
- Hypoaesthesia arm left
- Symmetric reflexes, negative Babinski sign

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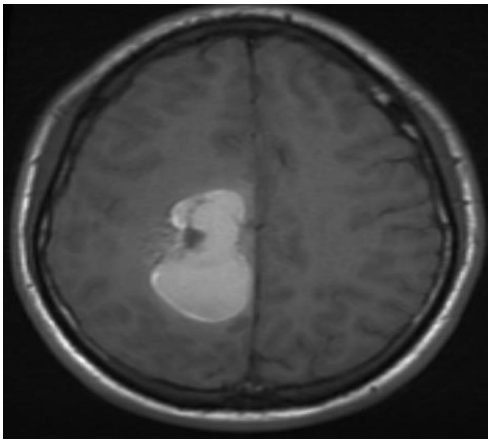
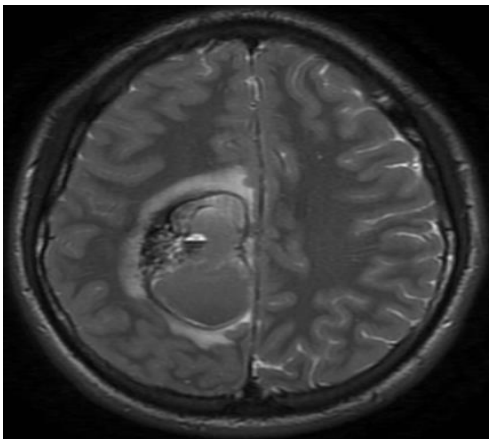
cMRI



cMRI (T1)

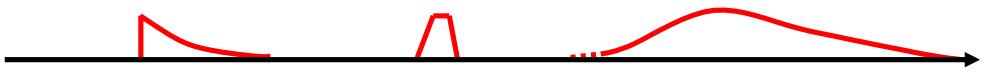


(T2)

histology: cavernous haemangioma

Transient neurological symptomes

	ischaemic	**epileptic**	**migraine aura**
Start	sudden	sudden	gradually
Progression	no	rapid	slowly
Symptoms	negative	positive	both
Territory	vascular	cortical	cortical
Duration	short	short	longer



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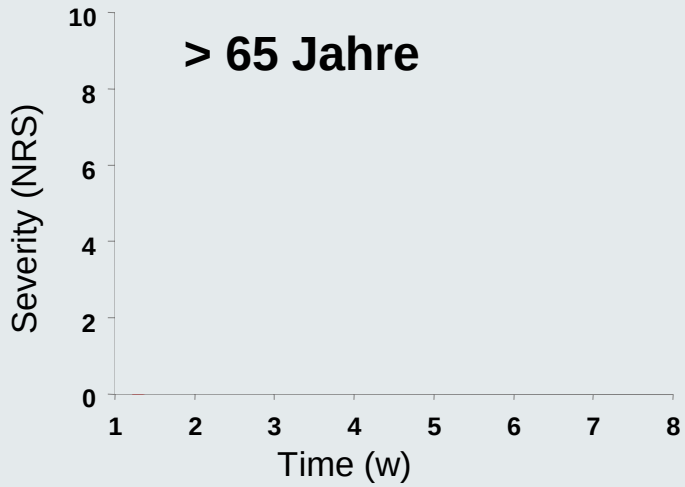
Case III

Carpenter, age 62

- Sleep consultation
- Side-locked headache
  - ongoing 2 months
  - no accompanying symptoms
  - Painkillers do not help

Giant cell arteritis

ICHD-3 6.4.1



- frontal, temporal
- progressive
- A. temporalis pressure sensitive
- BSR, CRP, WBC

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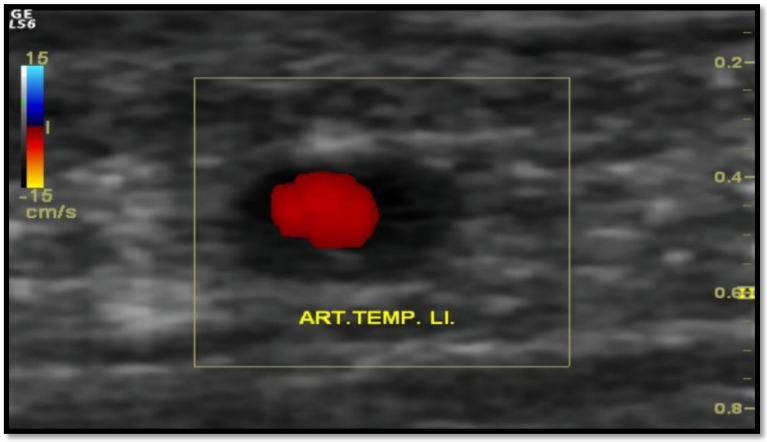
Sonography („Halo“)



Courtesy E.Hammer/Th. Weber

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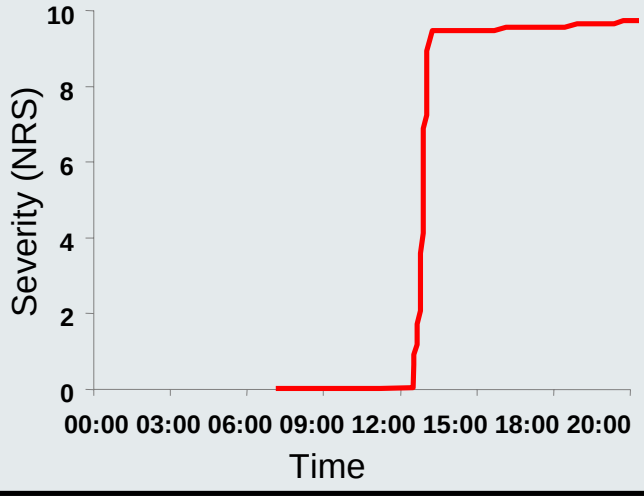
Case IV

Asylum seeker, age 38

- Ongoing headache for 10 days
  - several consultations on ER
  - diffuse with focus on the right neck
  - neurological examination and cranial CAT normal
  - painkillers do not help

Vertebral Artery Dissection

ICHD-3 6.5.1



- Horner syndrome
- Pulsatile Tinnitus

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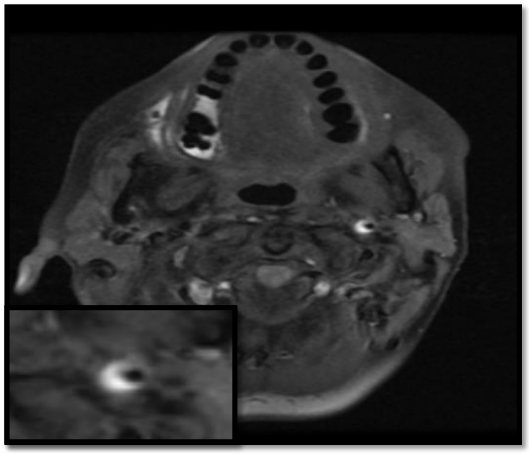

nMRI (T2 FATSAT)

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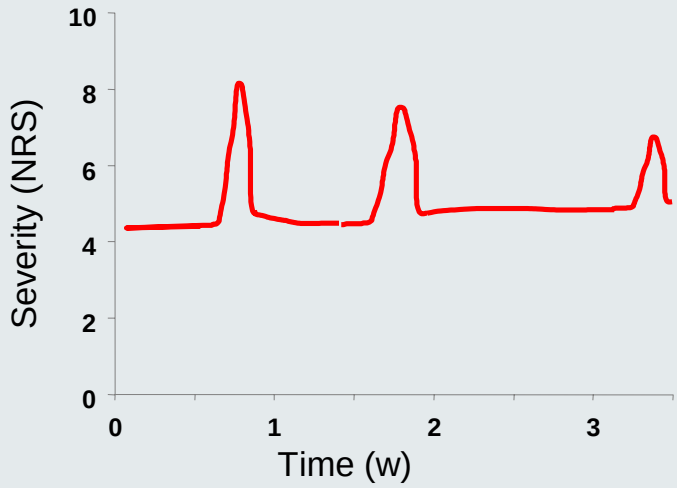
Case V

Accountant, age 35

- Chronic armpain after trauma
  - daily painkillers
- Ongoing headache for 3 months
  - sometimes vomiting
  - more severe than arm pain
  - had to stop working

Medication Overuse Headache (MOH)

ICHD-3 8.2



- almost daily
- dull-pressing
- sometimes migrainous
- painkillers >10 days

- Prevalence 1%

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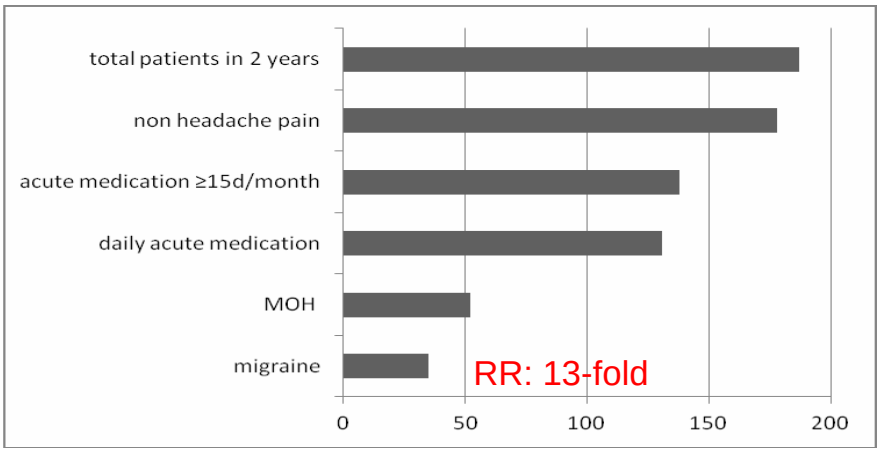
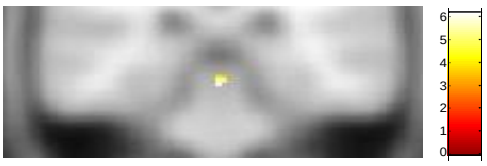
MOH in chronic pain patients

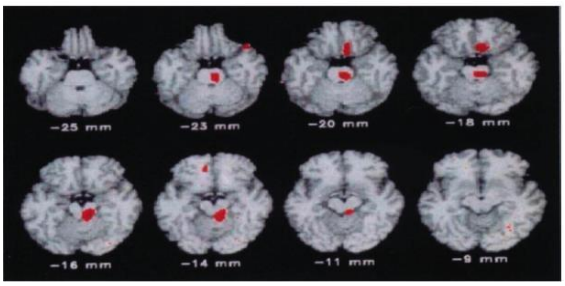


Wanner et al. J Headache and Pain 2013

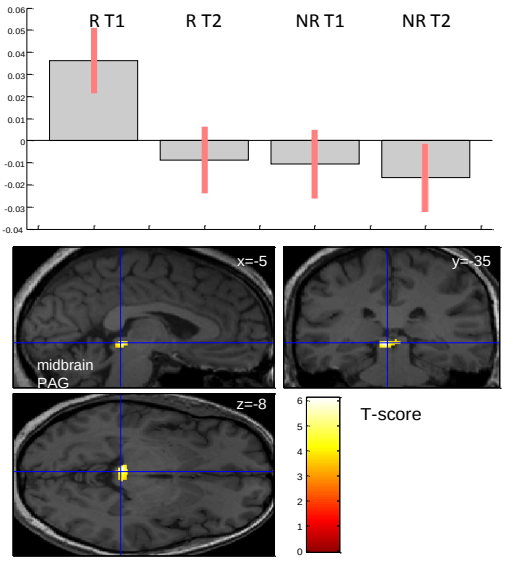
Morphometric changes in MOH



Riederer et al. WJBP 2012.



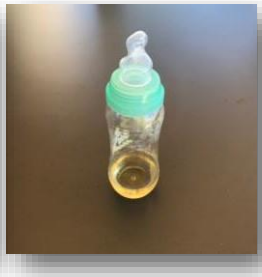
Weiller et al. Nature Medicine 1995.



Riederer et al. J Neurosci 2013.

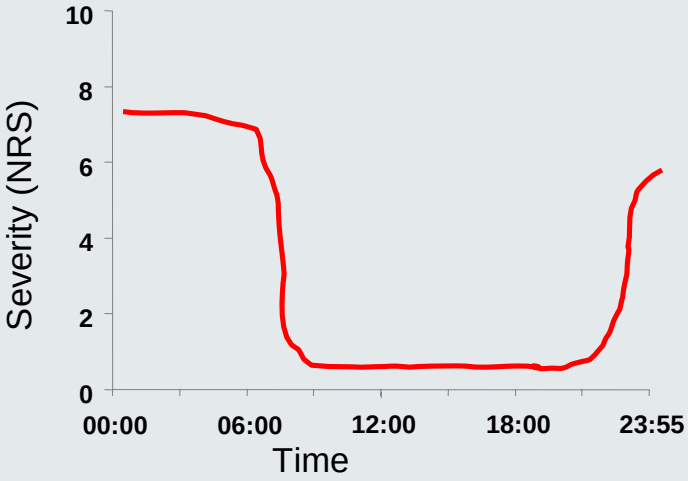
Diagnostic …






Idiopathic Intracranial Hypertension

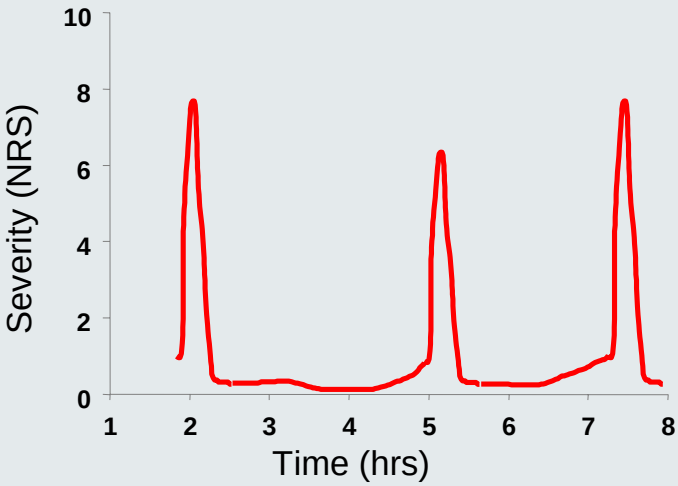
ICHD-3 7.1



- bilateral
- postural, Valsalva
- diplopia (VI)
- overweight
- acne

Acute Rhinosinusitis

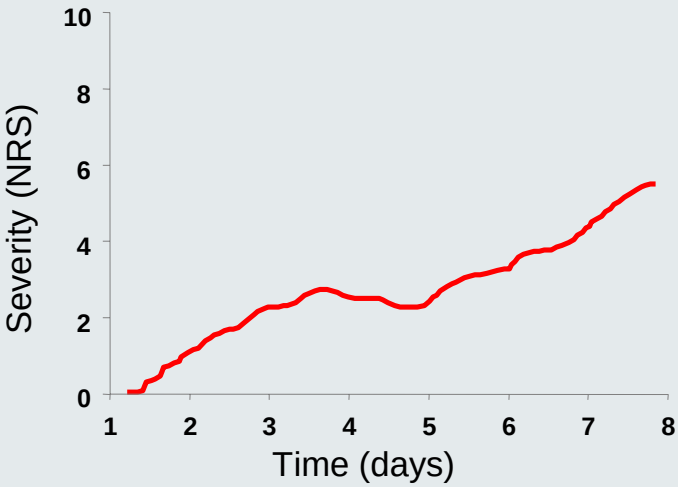
ICHD-3 11.5.1



- pulsating
- unilateral
- vomiting
- "kinesiophobia"
- fever, CRP

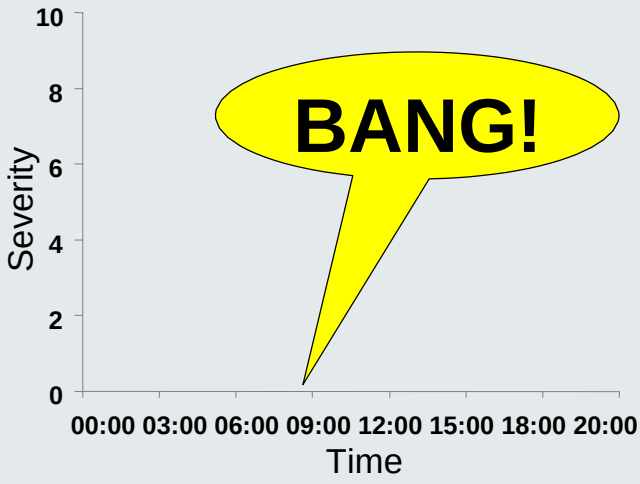
Cerebral Venous Thrombosis

ICHD-3 6.6.1



- bilateral
- progressing
- seizures
- somnolence

Exploding head syndrome



- age >50
- no pain
- several times a night

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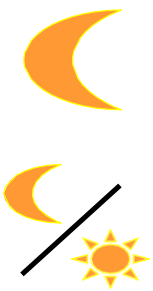
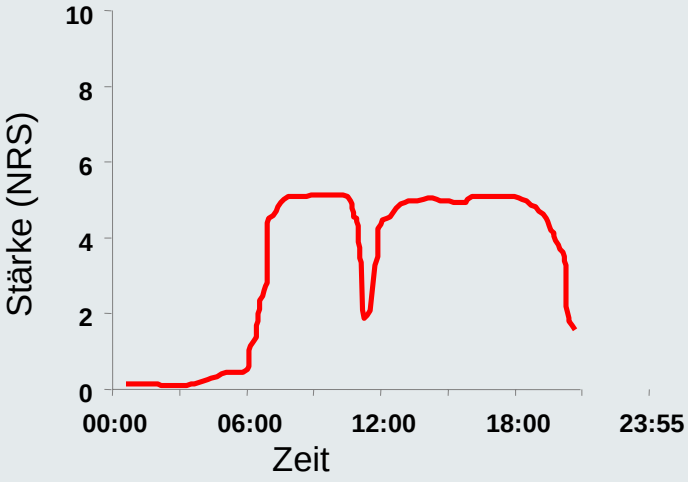
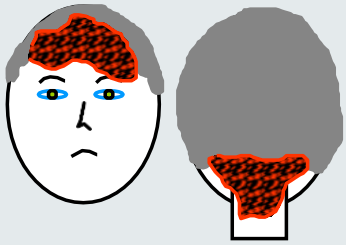


Cluster, SUNCT/A Hypnic Headache Paroxysmal Hemicrainia	Hemicrania Continua CDH/MOH NDPH, CTTH
SAH Thunderclap Headache „Exploding Head S.“	Migraine OSAS IIH

Low CSF pressure headache

ICHD-3 7.2

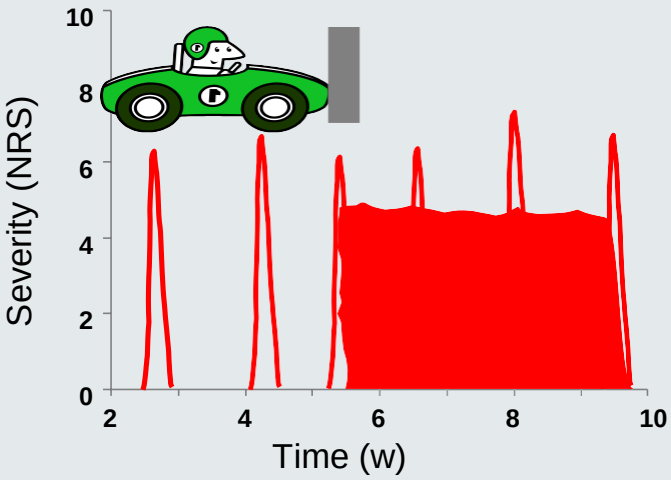




- bilateral
- postural
- 'whooshing'
- post LP
- minor trauma

Posttraumatic Headache

ICHD-3 5. ff



- MOH!!

Thank you

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sculptures Dr. Hansruedi Isler, M.D.