Getting to Grips with Headache
Brief Updates I - Secondary Headaches

• Ass. Professor Fabio Antonaci, Instituto Mondino, Pavia, Italy:
  • Medication Overuse Headache
  • Temporal Arteritis
• Ass Professor Lars Bendtsen, Danish Headache Center, Denmark
  • Trigeminal Neuralgia
• Professor Rigmor H. Jensen, Danish Headache Center, Denmark
  • High- and Low pressure headaches
International Headache Classification, Revised Edition (ICHD- II)

IHCD-II
14 subgroups

Group 1- 4
Primary headaches

Group 5–12
Secondary headaches

Group 13–14
Cranial neuralgias, etc

Migraine
Tension-type headache, Cluster headache

Medication
Trauma, stroke, Neoplastic and systemic disorders

Trigeminal neuralgia, Other cranial neuralgia and Facial pain disorders
The 8 most important questions to ask a headache patient

<table>
<thead>
<tr>
<th>Have you one or several different types of headache? Describe them one by one</th>
</tr>
</thead>
<tbody>
<tr>
<td>How long does your headaches last? (seconds, minutes, hours, days)</td>
</tr>
<tr>
<td>How frequent are your headaches?</td>
</tr>
<tr>
<td>What is the intensity of pain?</td>
</tr>
<tr>
<td>What do you do during a headache attack?</td>
</tr>
<tr>
<td>Where is the pain located?</td>
</tr>
<tr>
<td>Are there any associated symptoms?</td>
</tr>
<tr>
<td>Do you take medication?</td>
</tr>
</tbody>
</table>
The 8 most important questions to ask a headache patient

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you one or several different types of headache? Describe them one by one</td>
<td>One type, I think, vary in intensity</td>
</tr>
<tr>
<td>How long does your headaches last? (seconds, minutes, hours, days)</td>
<td>Constant, all day</td>
</tr>
<tr>
<td>How frequent are your headaches?</td>
<td>Constant lasted for more than 30 years, started as episodic at the age of 4</td>
</tr>
<tr>
<td>What is the intensity of pain?</td>
<td>Moderate to severe</td>
</tr>
<tr>
<td>What do you do during a headache attack?</td>
<td>Try to function, but have to lie down during severe pain</td>
</tr>
<tr>
<td>Where is the pain located?</td>
<td>Holocranial</td>
</tr>
<tr>
<td>Are there any associated symptoms?</td>
<td>Photophobia, phonophobia, sometimes nausea</td>
</tr>
<tr>
<td>Do you take medication?</td>
<td>Yes, I have to, on a daily basis</td>
</tr>
</tbody>
</table>
Diagnostic diary or headache calendar for at least 4 weeks
“When the cure become the cause”

“Ergotamine induced headache”

“Painkiller headache”

“Analgesic rebound headache”

“Drug-induced headache”

“Drug abuse headache”

“Medication overuse headache” (MOH)
ICHDI-II - “Medication-Overuse Headache”
II revision, 2006

... a system whereby medication overuse headache became a default diagnosis in all patients with medication overuse would encourage doctors all over the world to do the right thing, namely, to take patients off medication overuse as the first step in a treatment plan.

A. Headache present on ≥15 days/month

B. Regular overuse for >3 months of one or more acute/symptomatic treatment drugs as defined under sub form 8.2
   1. Ergotamine, triptans, opioids or combination analgesic medications on ≥10 days/month on a regular basis for >3 months

   2. Simple analgesics or any combination of ergotamine, triptans, analgesics, opioids on ≥15 days/ month on a regular basis for > 3 months without overuse of any single class alone

C. Headache has developed or markedly worsened during medication overuse
Which drugs cause MOH?

- Caffeine
- Ergotamine
- Dihydroergotamine
- Triptans
- Salicylates
- Acetaminophen

- Paracetamol
- NSAIDs
- Codein
- Opiates
- Tranquillisers
- Barbiturates

Combinations are frequent

All pain killers can cause HEADACHE
Clinical features (MOH)

- Daily or almost daily headaches
- Medication overuse

• **Medication intake**

- Dull diffuse headache
- Mild to moderate
- Holocranial
- Without associated symptoms
- Wake up with headache
- Superimposed migraine like attacks
MEDICATION OVERUSE HEADACHE

Physical therapy

Primary headache
Pain killers
Triptans or opioids
Other analgesics

Prophylaxis
HEADACHE AFTER DETOXIFICATION

Physical therapy

Other analgesics

Prophylaxis
Case 9

• 17 year old girl with mild episodic posttraumatic headaches for 6 months presents in ER with subacute, severe holocranial headache for 2 days. Double vision otherwise no visual symptoms

• No family history of headaches

• No reported exposition to hormonal therapy

• Questions: ?
Case 9
7. Headache attributed to non-vascular intracranial disorder

7.1 Headache attributed to high cerebrospinal fluid pressure
7.2 Headache attributed to low cerebrospinal fluid pressure
7.3 Headache attributed to non-infectious inflammatory disease
7.4 Headache attributed to intracranial neoplasm
7.5 Headache attributed to intrathecal injection
7.6 Headache attributed to epileptic seizure
7.7 Headache attributed to Chiari malformation type I
7.8 Syndrome of transient Headache and Neurological Deficits with cerebrospinal fluid Lymphocytosis (HaNDL)
7.9 Headache attributed to other non-vascular intracranial disorder
7.1.1 Headache attributed to IIH

B. Intracranial hypertension fulfilling the following criteria:
   1. alert patient with neurological examination that either is normal or demonstrates any of the following abnormalities:
   a) papilloedema
   b) enlarged blind spot
   c) visual field defect (progressive if untreated)
   d) sixth nerve palsy

2. increased CSF pressure (>200 mm H$_2$O [non-obese], >250 mm H$_2$O [obese]) measured by lumbar puncture in the recumbent position or by epidural or intraventricular pressure monitoring
3. normal CSF chemistry (low CSF protein acceptable) and cellularity
4. intracranial diseases (including venous sinus thrombosis) ruled out by appropriate investigations
5. no metabolic, toxic or hormonal cause of intracranial hypertension
IIH-epidemiology

- Incidence 1-2/100,000 in non-obese individuals
- Incidence 21/100,000 in obese women
- Prevalence?
- All ages (range 1 mth - ?) but most frequent between 20-40 years
- Male/female ratio: 1/4-15
IIH
Ocular symptoms and signs

- Visual field defects
- VI nerve palsy
- Decreased visual function
- Enlarged blind spot
- Impaired contrast sensitivity
- Colour vision defects
- Afferent pupillary defect
IIH- differential diagnosis

- Vascular diseases: Cerebral venous sinus thrombosis; AVM
- CSF hyperviscosity
- Haematological/ Endocrinological diseases
- Guillain-Barré
- Infections: Syphilis; Meningitis/encephalitis; Sinuitis, Otitis
- Pharmacological: Intoxications
- Circulatory: Hypertension; Congestive heart failure
- Neoplasms: Intracranial; lymphoma; Spinal cord tumour
- Others: Respiratory disease with CO2 retention; Sleep apnoea syndrome; Bechet; SLE
- Ophthalmological diseases?
IIH- prognosis

- Permanent visual loss in 40-87 %, severe in 10%
- Complete amplyopia in 5-10%!
- Recurrent episodes in 39%
- Optic atrophy in 9% (6 years follow up)
- Relapse of symptoms in 36 % (18 mth’s follow up)

(Wall 1991; Rowe 1998; Corbett et al 1982; Wall et al 1991; Kesler et al 2004; Yri et al 2011)
TAKE HOME MESSAGE
Idiopathic intracranial hypertension

- Obese woman of childbearing age
- Severe refractory headache (>90%)
- Papilloedema (>82%)
- Pulsatile tinnitus (>60%)
- Transitory visual obscurations
- Diplopia (VI palsy)

Benign intracranial hypertension is not benign and an early diagnosis is critical for outcome
Case 2

- 37-year old woman, previously infrequent migraine without aura, otherwise healthy
- On April 12th 2008 she experienced a buzzing sound in right ear. Five days later she developed subacute severe constant headache behind both eyes and in the parietal region. First days disappearance when lying down, worsening when she got up. Accompanying photophobia, nausea, stiffness in neck and dizziness WHAT TO DO?
- Admitted to hospital April 19th
- Objectively: Decreased hearing on right side, tenderness in neck muscles, temperature 38.1
- Differential diagnoses?
Case 2

- Ct-scan with venous sequences normal
- Lumbar puncture, 3 leukocytes, protein 0.57, glucose 2.9, pressure 3.5 cm water
- Diagnosis? What to do?
- Ordering MR with contrast
- Plenty of cola and fluids, slight improvement
- Blood patch next day, staying in bed for 24 hours, slight improvement
30.4.2008 – Ax, T1 with contrast
30.4.2008 – Cor, T1 with contrast
Pretreatment and Posttreatment Magnetic Resonance Imaging

- Subdural hygroma
- Pachymeningeal enhancement
- Engorged veins
- Pituitary hyperemia
- Sagging of the brain

7.2 Headache attributed to low cerebrospinal fluid pressure

7.2.1 Post-dural puncture headache

7.2.2 CSF fistula headache

7.2.3 Headache attributed to spontaneous (or idiopathic) low CSF pressure

7.2.3.1 A. Headache that worsens within 15 min after sitting or standing and improves within 15 min after lying, with ≥1 of the following and fulfilling criteria C and D: 1. neck stiffness; 2. tinnitus; 3. hypacusia; 4. photophobia; 5. nausea

B. Dural puncture has been performed

C. Headache develops within 5 d after dural puncture

D. Headache resolves either:
   1. spontaneously within 1 wk
   2. within 48 h after effective treatment of the spinal fluid leak
Spontaneous low pressure headache

- Can be seen after increase in intracranial pressure (e.g. coughing) but also occurs spontaneously
- Headache worsens within 15 min after sitting or standing
- Accompanied by neck stiffness, tinnitus, hypoacusis, photophobia and nausea
- Other symptoms: vertigo, diplopia and cranial nerve palsies, most often abducens
- The clinical picture will often be less typical over time
Case 2

- What to do now?
- Tablet caffeine 100 mg x 3 (but tolerated only 1 + ½)
- Did not want another blood patch. Discharged May 5th
- Followed up in DHC 19.5. Still daily headache, now also sometimes when lying down. Also dizziness, nausea and neck stiffness. All together some improvement and some effect from caffeine but still considerably affected, could not resume work
- Indometacine without effect. Offered new blood patch, but did not accept it
Case 2

- What to do?
- 28.5: third blood patch, immediately after blood patch major improvement, only vague symptoms, stayed in bed for 7 days.
- 11.8: only very mild headache 2-3 times per week and intermittent decreased hearing for seconds after standing, well-being.
- 23.2.2009: only very mild headache once a week and intermittent decreased hearing for seconds after standing, well-being.
TAKE HOME MESSAGE

Spontaneous intracranial hypotension

- Previously healthy young persons
- Sudden severe headache/neck pain after strain, coughing, sneezing, lifting
- “An ice cube in an empty glass”
- Orthostatic at presentation, resemble post lbp h.
- MRI: diffuse pachymeningeal Gd-enhancement
- CAN BE CURED
Questions, Please?