



Management of Chronic Headaches: An Interdisciplinary Approach

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Deborah C. Zajac RN-BC
Clinical Coordinator / IMATCH Program

Debbie Zajac has no conflict of interest to disclose.

- Identify primary and secondary causes of chronic daily headaches

- Describe treatment options including the IMATCH Program

Chronic daily headaches (CDH) can cause significant physical, psychological and social burden for patients, their families and society in general

International Headache Society 1996:Chronic Daily Headache (CDH)

- CDH defined as headache >15 days/mo for >3 months for > 4 h/day untreated
- CDH not recognized by International Classification of Headache Disorders (ICHD) I, 1988 [International Headache Society (IHS)]¹

1. Headache Classification Committee of the International Headache Society. *Cephalalgia*. 1988;8 Suppl 7:1-96.
2. Silberstein SD, Lipton RB, Sliwinski M. *Neurology* 1996;47:871-5.

What is chronic daily headache?

Primary	Secondary
• Chronic Migraines (CM)	• Medication Overuse Headache (MOH)
• Chronic Tension Type Headaches (CTTH)	• Post Traumatic Headaches
• Hemicrania Continua (HC)	• Metabolic Headaches - hypothyroidism
• New Daily Persistent Headache (NDPH)	

Most CDH evolves from episodic migraine

- Most CDH evolves from episodic migraine
- Thus, most CDH is transformed migraine, transformed from episodic migraine to daily headache
- Many, but not all patients remember their period of transformation
- Most CDH seen in the office is associated with acute medication overuse for episodic migraine (≥ 10 -15 days of use/month)

Primary Chronic Headaches

- Chronic Migraines
- Chronic Tension Type Headaches
- Hemicrania Continua
- New Daily Persistent Headaches

1.1 Migraine without aura

- A. At least 5 attacks fulfilling criteria B-D
- B. Headache attacks lasting 4-72 h (untreated or unsuccessfully treated)
- C. Headache has ≥ 2 of the following characteristics:
 1. unilateral location
 2. pulsating quality
 3. moderate or severe pain intensity
 4. aggravation by or causing avoidance of routine physical activity (eg, walking, climbing stairs)
- D. During headache ≥ 1 of the following:
 1. nausea and/or vomiting
 2. photophobia and phonophobia
- E. Not attributed to another disorder

ICHD-II. Cephalalgia 2004; 24 (Suppl 1) ©International Headache Society 2003/4

Chronic Migraine, IHS/AHS 2006

- At least 15 days of HA/month
- At least 4 hours/day untreated
- At least 8 days/month meet criteria for migraine
- No need for previous history of episodic migraine or transformation
- Does not meet criteria for NDPH, CTTH, Hypnic HA

Bigal ME et al. *Cephalalgia*. 2006;26:477-482.

2.3 Chronic Tension-Type Headache (CTTH)

- A. Headache occurring on ≥ 15 d/mo (≥ 180 d/y) for >3 mo and fulfilling criteria B-D
- B. Headache lasts hours or may be continuous
- C. Headache has ≥ 2 of the following characteristics:
 1. Bilateral location
 2. Pressing/tightening (nonpulsating) quality
 3. Mild or moderate intensity
 4. Not aggravated by routine physical activity
- D. Both of the following:
 1. Not >1 of photophobia, phonophobia, mild nausea
 2. Neither moderate or severe nausea nor vomiting
- E. Not attributed to another disorder

ICHD-II. *Cephalalgia*. 2004;24(suppl 1).

Hemicrania Continua

- Unilateral pain without side shift
- Daily and continuous without pain-free periods
- Moderate intensity but with periods of exacerbation of severe pain
- At least one autonomic feature occurs during exacerbation eg: ipsilateral lacrimation, nasal congestion, rhinorrhea or ptosis
- May have migrainous features
- Complete response to therapeutic doses of Indomethacin

New Daily Persistent Headache (NDPH)

- ICHD-2: Abrupt onset of CTTH
- One of the most treatment-refractory of all headaches
- Develops abruptly over 3 days in a patient with no prior history of headache
- It can continue for years despite aggressive treatment

ICHD-II. *Cephalalgia*. 2004;24(suppl 1).
Wolff's Headache, 8th ed, Oxford Press, NY, 2008.

CDH—Classification Silberstein and Lipton (S-L) *Neurology*, 1996

Daily or near-daily headache lasting >4 hours for >15 days/month	
1.8 Transformed migraine (TM)	1.8.1 With medication overuse 1.8.2 Without overuse
2.2 Chronic tension-type headache (CTTH)	2.2.1 With overuse 2.2.2 Without overuse
4.7 New daily persistent headache (NDPH)	4.7.1 With overuse 4.7.2 Without overuse
4.8 Hemicrania continua (HC)	4.8.1 With overuse 4.8.2 Without overuse

Silberstein SD, Lipton RB, Sliwinski M. *Neurology* 1996;47:871-75.

Secondary Chronic Headaches

- Post Traumatic Headaches
- Metabolic Headaches
- Medication Overuse Headaches

Post Traumatic Headaches

IHS code: 5.2 Chronic posttraumatic headache

- Unrelated to age or severity of injury
- Studies have suggested that chronic post traumatic headaches are more likely to follow mild head injuries
- Usually no evidence of any intracranial injury or cerebral edema

Metabolic Headaches

- HIS code 10.7 Headache attributed to other disorders of homeostasis
- Headaches can be a feature of many metabolic disorders such as hepatic and renal failure, secondary to infections, constipation, or thyroid disorders

Medication Overuse Headaches / MOH A8.2 2006

- A. Headache on ≥ 15 days/month
- B. Regular overuse for > 3 months of \geq one acute/symptomatic treatment drugs:
 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
- D. Headache resolves or reverts to its previous pattern within 2 months after discontinuation of overused medication

Headache Classification Committee. Cephalalgia 2006; 26:742-746.

The use of non-specific, sub optimally effective medications for disabling migraines leads to rebound (medication-overuse) headaches!

The Uncertainty of MOH

- **“The problem is that MOH cannot be diagnosed until the overuse has been discontinued and the patient has been shown to improve.**
- **This means that when patients have it, it cannot be diagnosed.”¹**

1. Headache Classification Committee. *Cephalalgia* 2006; 26:742-746.

Daily Analgesic Intake and the Development of Medication-overuse Headache

- **Most patients with MOH have a history of episodic migraine**
- **When non-migraine patients, eg: arthritis patients, take analgesics daily, they do not develop MOH or CDH**
- **When migraine patients with a non-headache medical condition take analgesics daily for that condition, they can develop MOH**

Lance F, et al. *Headache* 1988;61-62.
Wilkinson SM, et al. *Headache* 2001;41:303-309.
Bahra A, et al. *Headache* 2003;43:179-190

Other issues

- **Not all patients improve after discontinuation**
- **Even those who don't improve after withdrawal may become responsive to previously ineffective prophylaxis**
- **Patients who become chronic due to medication overuse may become permanently chronic**
- **A default diagnosis of MOH in all patients with medication overuse would encourage doctors globally to do the right thing, namely to detoxify patients as the first step in treatment**

Headache Classification Committee. *Cephalalgia* 2006; 26:742-746.

Keys to Medication-Overuse Headache

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- Medication overuse headache is related when patients' preventive medication is ineffective
- MOH is a frequent cause of the failure of migraine-specific medications to work
- "Detoxification" results in a restoration of an episodic migraine pattern in the majority of patients, made even more likely by addition of preventive medication
- In most patients, "detoxification" results in a restoration of the effectiveness of appropriate preventive and acute medications

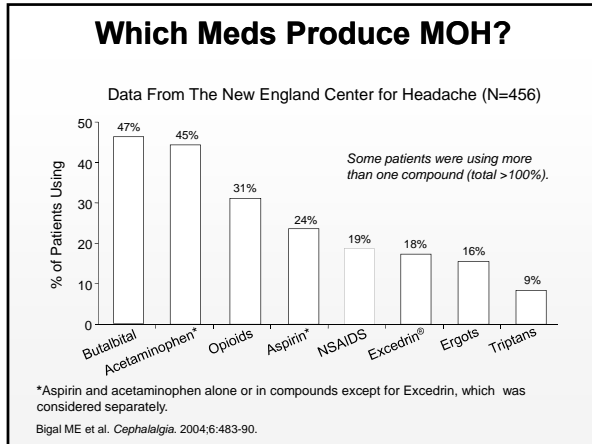
Sheffell FD. *Postgrad Med.* 1996;4:40-46

Frequent Opioid or Barbiturate (Butalbital) Use Is a Risk Factor for Migraine Progression

- Growing evidence that overuse of analgesic medications leads to worsening of migraine
- AMPP data
 - Frequent use of opioids (8 d/mo) or butalbital (8 d/mo) is a risk factor for progression to chronic migraine
 - Triptan use or NSAID use (10d/mo) for progression

AMPP, American Migraine Prevalence and Prevention. Bigal ME, Lipton RB. *Neurology*. 2008;71(22):1821-1828; Slide adapted from Dr. Andrew Charles

Shewell J. *Current Med*. 7/08



Treatment of Medication-overuse Headache: Pharmacologic Treatment

General Considerations

- Provide calendars/diaries for documentation
- Be explicit about medication doses, frequency, and limits
- Discourage PRN usage for mild headache intensities during the washout period
- Provide adequate medication for moderate or severe intensity headache with appropriate limits
- Restrict total use of all acute headache drugs to 10 days per month (2004 IHS recommendation)
- **NO REFILLS FOR PRN MEDS** during washout period

Headache Classification Subcommittee of the International Headache Society. The International Classification of Headache Disorders. *Cephalalgia*. 2004;24 (Suppl 1). Sheffell FD. *Postgraduate Medicine*. 1996(Oct):40-46.

Treatment of Medication-overuse Headache: Non-pharmacologic Treatment

Behavioral management techniques have been shown to produce additional benefits beyond pharmacotherapy alone.

- **Proper/regular diet, exercise, and sleep hygiene**
- **Time management including "my time"**
- **Use of headache calendar to help monitor possible triggers, medication intake and effect, as well as frequency, intensity, and duration of headache**
- **Biofeedback training and stress management**
- **Cognitive therapy**
- **Active,not passive**

Lipchik GL and Nash JM. *Curr Pain Headache Rep*. 2002;6:473-479. Silberstein SD and Saper JR. In: *Wolff's Headache and Other Head Pain*. SD Silberstein SD, Lipton RB, and Dalessio DJ, eds. Oxford University Press, New York, 7th Ed. 2001:267.

Treatment of Medication-Overuse Headache:
Education and Support

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-
- Being afraid of being a drug addict or addict
- Manage expectations: improvements require time
 - Headaches may get worse for several weeks before they get better
- Explain importance of sticking to program and long-term follow-up
- Arrange for frequent visits during analgesic washout period (1-3 months)
- Educate family and significant others to enhance support

Shelton FD. Postgrad Med. 1996;4:40-46.

Impairment in Functioning

- **Significant disability and a reduced quality of life**
- **Compared to Episodic Migraine (EM), Chronic Migraine (CM) had:**
 - **More total headache days over three months**
 - **Missed more days of work or school**
 - **Had more reduced effectiveness days at work or school**

Guitera, V., Muñoz, P., Castillo, J., & Pascual, J. (2002). Quality of life in chronic daily headache: A study in a general population. *Neurology*, 58, 1062-1065

Impairment in Functioning

- **EM vs. CM (cont.)**
 - **Missed more days of housework**
 - **Missed more days of family, social, or leisure activities**
- **Lower QOL scores in role physical, bodily pain, vitality, and social functioning.**

Guitera, V., Muñoz, P., Castillo, J., & Pascual, J. (2002). Quality of life in chronic daily headache: A study in a general population. *Neurology*, 58, 1062-1065

IMATCH

**Interdisciplinary
Method of
Assessment and
Treatment of
Chronic
Headaches**

A New Outpatient Approach

A team approach which includes physical therapy, pain and stress management techniques and medication adjustments.

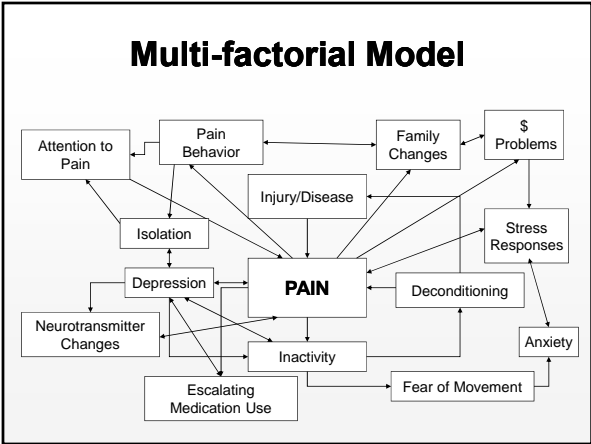
Three week full-day treatment program

- infusion therapy
- physical therapy
- medical interventions
- psychological treatment

- **Treatment is focused on improving the ability of patients function in the face of pain, rather than eliminating pain.**
- **We also strive to convert daily headaches into a more episodic pattern.**
- **Encouraging the resumption of normal activities and placing the patient in charge of recovery helps to break the passive and then crisis focus of prior care**

What do we do during the three weeks ?

- goal setting
- infusion therapy
- group physical therapy
- individual physical therapy
- diet instruction
- sleep hygiene
- assertiveness training
- cognitive behavior therapy
- biofeedback
- crisis planning
- relaxation therapy
- activity pacing training
- self esteem groups
- intimacy groups
- mindfulness
- family meetings



Lifestyle Adjustments

- **Social consequences of "Pain Behavior"**
 - Short-term benefits
 - Long-term consequences
 - Role of attention in pain experience

Psychological and Behavioral Interventions

- ...more than just Biofeedback!
- **Cognitive Behavioral Therapy (CBT)**
 - Cognitive restructuring
 - Coping skills
- **Biofeedback**
- **Lifestyle changes**
- **Medication management**

Cognitive Behavioral Therapy

- **Identifying maladaptive thoughts, beliefs, attitudes**
- **Cognitive restructuring**
- **Emotional regulation**
- **Behavior modification**
- **Self-monitoring**
- **Alternative coping strategies**
- **Homework**
- **Relapse Prevention**

Cognitive Behavioral Therapy

- **CBT is shown to reduce headache frequency by 50-68% compared to 20% for controls (56% for biofeedback)**
- **Nash et al. (2004) found that 50% of participants experienced at least a 50% reduction in headache frequency from pre- to post-treatment (10 sessions, group CBT)**

Martin, P., Forsyth, M., & Reece, J. (2007). Cognitive-behavioral Therapy Versus Temporal Pulse Amplitude Biofeedback Training for Recurrent Headache. *Behavior Therapy*, 38, 350-363.
 Nash, J., Park, E., Walker, B., Gordon, N., & Nicholson, R. (2004). Cognitive-Behavioral Group Treatment for Disabling Headache. *Pain Medicine*, 5(2), 178-186.

Cognitive Behavioral Therapy

- **Improvements in headache**
- **Reduction in symptomatic medication use**
- **Improved QoL**
- **Reduction in depression and anxiety**
- **Reduction in catastrophizing**
- **Increased self-efficacy**

Nash, J., Park, E., Walker, B., Gordon, N., & Nicholson, R. (2004). Cognitive-Behavioral Group Treatment for Disabling Headache. *Pain Medicine*, 5(2), 178-186.
 Thorn, S., Pence, L., Ward, L., Kilgo, G., Clements, K., Cross, T., Davis, A., & Tsui, P. (2007). A Randomized Clinical Trial of Targeted Cognitive Behavioral Treatment to Reduce Catastrophizing in Chronic Headache Sufferers. *The Journal of Pain*, 8(12), 938-949.

Alternative Coping Strategies

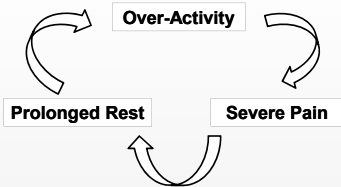
- **Relaxation training**
 - **Diaphragmatic breathing**
 - **Progressive muscle relaxation**
 - **Guided imagery**
 - **Mindfulness meditation**
 - **Cue-controlled relaxation**
 - **Autogenics**

Biofeedback

- Patients are trained to improve their health by using signals from their own bodies
- Sensors feed information to an encoder which provides visual “feedback”
- Practice and strategies promote changes in physiological indicators

Lifestyle Adjustments

- Activity Pacing



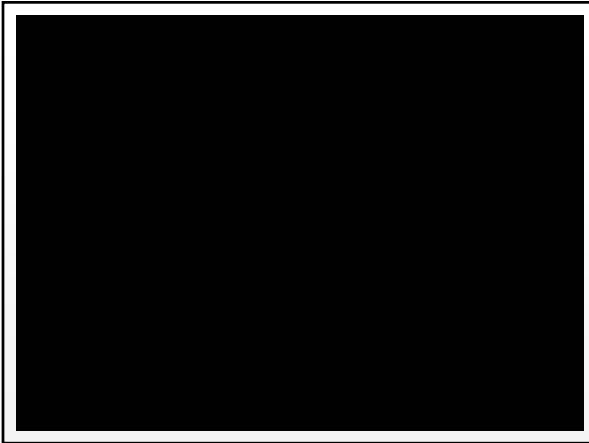
- Balance between over-activity and under-activity
- Implementing breaks/Relaxation practice

Lifestyle Adjustments

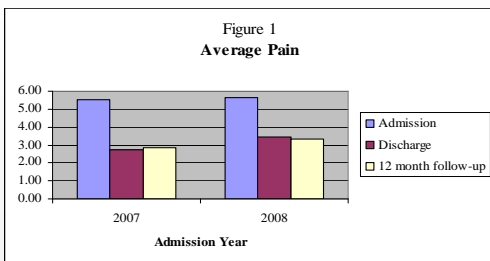
- Self-monitoring
 - Daily logs to measure activity level, sleep patterns, relaxation practice
 - Diaries tracking headache pattern, pain levels, stress levels, dietary triggers, weather, exercise
- Sleep Hygiene

Lifestyle Adjustments

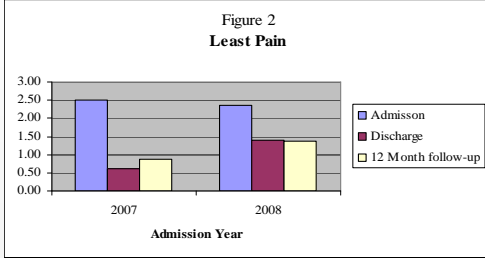
- Assertiveness training
- Self-esteem
- Family and supportive relationships
- Relapse Prevention
- Crisis Planning



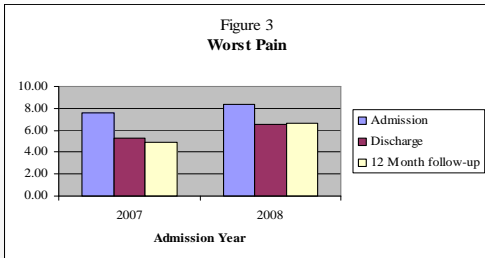
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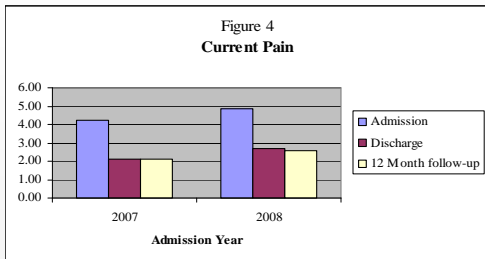
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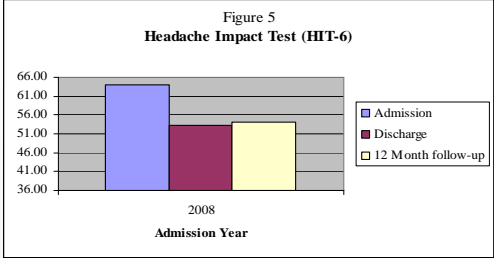
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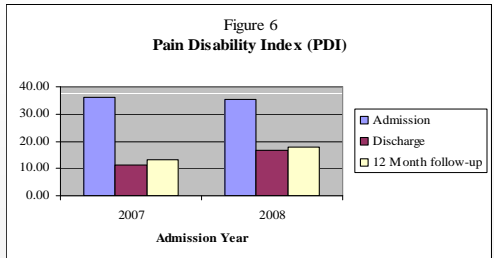
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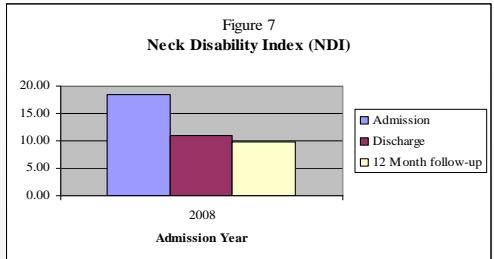
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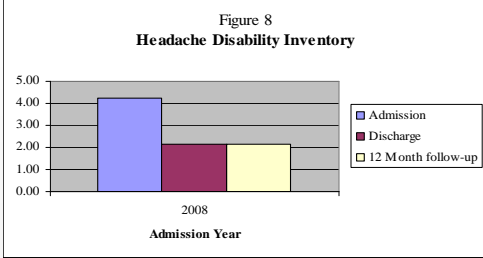
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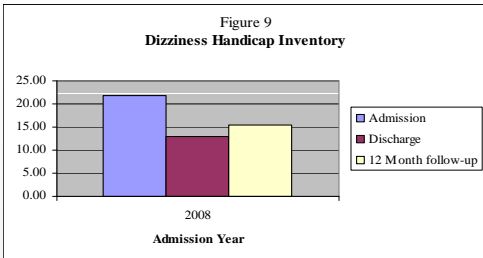
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Thank You
very much