Refractory Headache Patients

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Disclosures
• none

Learning objectives
• History and development of BPC and BHI
• Review definition of headache types
  ▫ Detailed history
  ▫ Detailed documentation
• Medication options
  ▫ Preventive
  ▫ Abortive
  ▫ Interventions
• Refractory patients
• Case study

Where it all began
• Boston Pain Care
  ▫ Started in 2007
  ▫ 6 anesthesiologists who wanted to practice pain differently
  ▫ “there’s always room for one more”
  ▫ Focus remains on function
  ▫ Multidisciplinary care

Where it all began
• Boston Headache Institute
  ▫ Started in March, 2012
  ▫ Set up by the director, Dr. Zahid Bajwa
  ▫ Joined Nov, 2014
  ▫ Dr. Bajwa runs BHI with Dr. Silk, two NPs, RNs, behavioral health staff
  ▫ Dr. Bajwa continues to share patients with outside specialists such as:
    ▫ Dr. Noshir Mehta (Tufts)
    ▫ Dr. Steven Servani (MGH)

Multidisciplinary care at BPC
• Medication management (opioid vs. non-opioid program)
• Headache center
• Sleep center
• Surgical center – interventional procedures
• Functional activities
• Behavioral health services
  ▫ CBT, Biofeedback, hypnosis for smoking cessation
• Research institute
Multidisciplinary care at BHI

- Boston Headache Institute
  - Follow up visits
  - Medication adjustments
  - Interventions
    - Nerve blocks/trigger points
    - Onabotulinum toxin A injections
  - Behavioral health
    - CBT
    - Biofeedback

When a new patient is evaluated...

Upon discussion with the patient

- Patients present with a number of diagnoses
  - Google
  - Other providers
  - Friends/family
- Detailed history taking often reveals they have a spectrum of a disorder rather than multiple headache types
  - "just a regular headache"
  - "...its not the same as my mom who is nauseous/vomiting"

The International Classification of Headache Disorders (3rd edition)

- Primary headache
  - Not attributable to any other underlying condition
    - Migraine
    - Tension-type
    - Trigeminal autonomic cephalgias
    - Cluster
    - Hemicranias
- Secondary headache
  - The result of a underlying condition
    - Headache attributed to
      - a trauma
      - a vascular event
      - an infection
      - behavioral health concerns

The International Classification of Headache Disorders (3rd edition)

- Migraine
  - At least five attacks fulfilling the characteristics listed below
  - Headache duration lasting 4-72hrs
  - At least two of the four characteristics
    - Unilateral location
    - Pulse-like quality
    - Moderate or severe pain intensity
    - Aggravation by movement
  - During the headache at least one of the following:
    - Nausea and/or vomiting
    - Photophobia and phonophobia
  - More specifically
    - With aura
      - Visual or sensory
    - Without aura
    - Probable migraine
  - Define even further
    - Episodic: <15 days/month
    - Chronic:>15 days/month

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Migraine classification

- When taking a history from the patient push them to extremes
  - Associated symptoms
    - Photophobia – how are they at the beach at 12 noon?
    - Phonophobia – how are they at a rock concert?
    - Movement – can you do jumping jacks with the pain?

Migraine documentation

- Migraine patients can present on a large spectrum of disability
- Documentation is key
  - Headache frequency
  - Photophobia – how are they at the beach at 12 noon?
  - Phonophobia – how are they at a rock concert?
  - Movement – can you do jumping jacks with the pain?

Migraine documentation

- Headache frequency:
- Headache severity:
- Headache duration:
  - Allows for easier comparison for improvement or worsening of symptoms

Chronic migraine w/ or w/o aura

- Typically the population that is at BHI/BPC
- Failed multiple other providers/HA centers
  - Important to compile a tried/failed list of medications and procedures
    - Failed preventives
    - Failed abortives
    - Failed procedures
  - Frequently daily or continuous daily
  - Central sensitization

Chronic migraine preventive options

- Patients who are >15x/month or more
- Preventives
  - Reduce the frequency and severity of headache pain
  - Make patients less responsive to triggers (ie. Weather, hormone fluctuation)
- Abortives
  - Take as needed for breakthrough pain
  - Fine line when headaches are frequent
  - Most are intended for 2-3x/wk use not daily use

Preventive options

- Beta-blockers
  - Propranolol ER and timolol
  - Contraindicated: asthma
- Tricyclic antidepressants
  - Amitriptyline and other TCAs
- Anti-seizure meds
  - Topiramate
  - Contraindicated: kidney stones
  - Valproate
  - Gabapentin
  - Zonisamide
- Anti-depressants
  - SNRI (ie. duloxetine, venlafaxine)
Preventive options

• Secondary oral options
  ▫ Muscle relaxers
  ▫ ACEI
  ▫ Antipsychotics

• Goal is to always use a secondary SE of the medication to patient’s advantage
  ▫ Need help with sleep?
  ▫ Need help with appetite suppression?
  ▫ Need help with panic?
  ▫ Need help with hypertension?

Supplements and diets

• The latest and greatest OTC supplement
  ▫ Vitamin D
  ▫ CoQ10
  ▫ Magnesium
  ▫ B complex
  ▫ Ginger
  ▫ Turmeric

• Diets
  ▫ Avoid super restrictive diets
  ▫ If patient can clearly point to a dietary trigger, then avoid it

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Calcitonin Gene-Related Peptide (CGRP) therapies

• New class of medications to help with both episodic and chronic migraines
• New to the market
• TRIal with a few of our patients who have failed onabotulinum toxin A
  ▫ A number of patients think the CGRP is working and reducing severity of pain
  ▫ A few reported GI side effects, some significant to discontinue use

Preventive procedures

• Onabotulinum toxin A
  ▫ FDA approved for chronic migraine q12 wks
• Nerve blocks/trigger points
  ▫ 1% lidocaine/0.25% bupivacaine
  ▫ Can be w/ or w/o steroids
  ▫ Higher volume than typically used in AHS
    ▪ Higher volume allows for preventive properties
    ▪ Can still be used to abort a migraine cycle

How do we treat TMJ patients?

• Specific medication considerations
  ▫ Muscle relaxers
  ▫ Prior trial of onabotulinum toxin A (likely lower doses)
  ▫ NSAIDs
• Nerve blocks into the masseter, pterygoid muscles
• Onabotulinum toxin A in the masseter
Nerve blocks/trigger points
- Great option for headache/facial pain due to low side effect profile
- No cosmetic effect like with onabotulinum toxin A
- Can point and shoot where pain occurs
  - Particularly helpful for post traumatic locations

Abortive options
- Triptans
  - Sumatriptan, rizatriptan, zolmatriptan, etc
- NSAIDs
  - Naprosyn, diclofenac, indomethacin
- Neuroleptics
  - Odanoteron, prochlorperazine, promethazine
- Create abortive cocktail for the patient
  - Ideally pain relief <1 hr
Medication overuse headache (MOH)

- Defined by IHS as:
  - Inappropriate use of symptomatic medication for headaches may paradoxically lead to medication overuse headache (MOH)
  - Characterized by chronic headache patterns with the overuse of abortive medications

Options! Options! Options!
Sometimes there are too many options available

Medication overuse headache (MOH)

- Insurance makes it difficult to get the appropriate number of triptans
  - Often multiple rx for triptans
- Patients think they’re avoiding MOH by limiting their triptans, NSAIDs, neuroleptics to different days of the week
  - They are aborting everyday
- Most likely MOH meds
  - Too many triptans
  - Addition of Fioricet – other provider, internet, etc
  - Daily excedrin use

Refractory patients

- Typically continuous daily
- Central sensitization
  - Allodynia

- Typically admit for inpatient infusions
  - Not covered by insurance in Mass
  - No hospitals do inpatient infusions
  - Option is to offer out of state centers
    - Philadelphia, Michigan, Chicago

Refractory patients

- BHI can offer:
  - Infusions
    - Without sedation – works well with patients who got thrown into a severe flare and cannot break with oral medications
  - With sedation
    - Can get nerve blocks/trigger points
    - Most aggressive option we offer outside of the ER
      - Far more migraine friendly as well
Refractory patients

- Infusions
  - IV fluids
  - Diphenhydramine
  - Neuroleptic
  - Dihydroergotamine (DHE)
  - Ketorolac
  - Magnesium
  - Sedation
  - Propofol
  - Lidocaine

Refractory patients

- Necessitates close follow up for these patients
  - Repeat nerve blocks/trigger points
    - In series or on a schedule
  - Continued medication adjustments
  - Preventives and abortives
  - ER protocols

- If still nonresponsive to treatment consider...
  - Sleep eval – OSA
  - Behavioral health

Still nonresponsive?

- Is the pain coming from a deeper source?
  - Cervical spondylosis w/o radiculopathy
  - Facet injections
  - Radiofrequency ablation

Case study: A.M.

- A.M. is a 46 y/o female with continuous daily migraines
  - VSS, wt 237lbs
  - PMH significant for RA, cataracts, GERD, depression, PTSD
  - Migraines started at age 12
  - Failed preventives:
    - Valproic acid, topiramate, propranolol, tizanidine, gabapentin, acetazolamide, baclofen, carisoprodol, amitriptyline, valproate, dexamethasone, bupropion, butrans patch, methocarbamol
  - Failed abortives:
    - Prednisone, naratriptan, almotriptan, sumatriptan (tab, NS, inj), rizatriptan, eletriptan, butalbital, dihydroergotamine, prochlorperazine, oxcarbazepine, hydroxyzine, hydrocodone, ketoralac, olanzapine, oxycodone-acetaminophen
  - Tried procedures:
    - Onabotulinum toxina, nerve blocks/trigger points
    - Negative sleep workup

Case study: A.M.

- The patient started treatment to break her headache cycle:
  - Botox under sedation
  - Weekly nerve blocks/trigger points
  - Her prior neurologist retired and she wanted Dr. Bajwa to take over prescribing her opioids
  - At that time she was on Butrans 20mg patch, dilaudid and vicodin PRN
  - She was evaluated by the medication management program at BPC and enrolled

Case study: A.M.

- The patient continued in the medication management program on a monthly basis reporting her pain was a 2-3/10
  - Despite continued Onabotulinum toxina, weekly nerve blocks
  - She regularly followed up with cervical components of her pain including cervical facets and RFAs
  - With all the treatments no real improvement in functional pain score
  - Frequent ER visits as pain escalates and she starts vomiting and cannot stop
    - ER is closer than BHI
    - ER has zero copay
Case study: A.M.
- The patient was referred to behavioral health
- Discussion with our medication management team meeting
  - Including Dr. Bajwa
  - Including Dr. DiBenedetto
- Decided to get a second opinion with Dr. Spierings and Dr. Kulich
  - Felt strongly that there was a ritual around to see Dr. Bajwa weekly
- Recommended weaning opioids and behavioral health follow up

The patient’s opioids were discontinued in June, 2018

Case study: A.M.
- Given doses of CGRP medication
  - Receptor specific
  - Given on 8/13/18 and 9/19/18
  - Reported improvement in the severity of her pain after first dose
  - Less ER visits = no escalating with vomiting
  - Patient saw 15lb weight gain in 8 wks

Case study: A.M.
- Given different CGRP on 10/18/18
  - Ligand specific
  - Given on 10/18/18
  - Will monitor weight on different medication

- Continues with Botox q12 wks
  - Resumed nerve blocks/trigger points on a much less frequent basis (qmonth)
- Still not interested in behavioral
Case study: A.M.
- We consider this a drastic improvement with reduced ER visits and the elimination of opioids
- Hopefully she may reconsider behavioral in the future
- Hopeful that she responds better to the other CGRP options

Conclusion
- Boston Pain Care is a multidisciplinary pain clinic that focuses on improving function
- Boston Headache Institute offers a variety of different treatment options for patients suffering with headaches and facial pain
- “...always have room for one more…”
- Continue to work with outside specialists to help better care for patients

Questions?