Management options for Migraine

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Assessment

The Migraine Disability Assessment Score MIDAS

- Complete loss of work
- Partial loss of work
- Off house hold work
- Partial house hold work
- Loss of social activities
- How painful headache

Disability Score

- Grade-1(minimal)
- Grade-2(mild)
- Grade-3 (moderate)
- Grade-4(severe)

Migrain mangemnt

Predisposing factors

- Stress
- Depression/anxiety
- Menstruation
- Menopause
- Head or neck trauma

triggers

- Week end relaxation
- Change of habit
- Bright light/loud
- Diet/drink
- Unaccustomed exercise
- Menstruation

Nonpharmacologic Management

- Diet
- Discipline
- Diary

Food trigger

- Migraine onset within 6 hrs of intake
- The effect is reasonably reproducible
- Withdrawal leads to improvement

Trigger diary

- The daily trigger diary and attack diary are best reviewed after at least five attacks
- Information of each is compared for coincidence of triggers with attacks

Discipline

- Regular exercise
- Sound sleep
- *Avoid*
- Undue stress,
- excess caffeine,
- excess alcohol

Headache diary

Date:	**Date:**	**Date:**
Warning signs:	**Warning signs:**	**Warning signs:**
Time begun:	**Time begun:**	**Time begun:**
Time ended:	**Time ended:**	**Time ended:**
Type of pain: eg, piercing, throbbing, etc.	**Type of pain:** eg, piercing, throbbing, etc.	**Type of pain:** eg, piercing, throbbing, etc.
Intensity of pain: Circle one Low 1 2 3 4 5 6 7 8 9 High	**Intensity of pain:** Circle one Low 1 2 3 4 5 6 7 8 9 High	**Intensity of pain:** Circle one Low 1 2 3 4 5 6 7 8 9 High
Location: eg, between eyes, back of head, etc.	**Location:** eg, between eyes, back of head, etc.	**Location:** eg, between eyes, back of head, etc.
Treatment or medication taken:	**Treatment or medication taken:**	**Treatment or medication taken:**
Effect of treatment:	**Effect of treatment:**	**Effect of treatment:**
Hours of sleep:	**Hours of sleep:**	**Hours of sleep:**
What I ate today:	**What I ate today:**	**What I ate today:**
Events prior to headache: eg, strenuous activity, elevated stress, etc.	**Events prior to headache:** eg, strenuous activity, elevated stress, etc.	**Events prior to headache:** eg, strenuous activity, elevated stress, etc.

Hormonal changes

- Migraine is three times more in female
- Start around puberty continue till manopause
- Lessened during pregnancy
- Menstrual migraine:

Management

- Non pharmacological
- Pharmacological

Drug treatment

- Abortive
- Prophylaxis

Drug treatment

- Stratified mangement
- Stepped mangement
- Concept of failure

Treatment ladder

- Step-1:simple oral analgesic± antiemetic
- Step-2:rectal analgesic ± antiemetic
- Step-3:specific antimigrain drugs
- _____
- Step-4

Drugs in acute attack:things to know

- Analgesic doses are greater than standered doses
- Buffered soluble /orodispersible formulations better
- Early in attack for better absorption
- Upto 4 doses in 24 hrs

Drugs in acute attack: things to know

- Maximum dose at start
- Avoid slow release formulations
- Should not contain codeine
- Paracetamol alone is not effective

Things to know

- A large single dose tends to work better than repetitive small doses.
- Many oral agents are ineffective because of poor absorption secondary to migraine-induced gastric stasis.
- Except in some occasions in women on oral estrogens or contraceptives, migraine is not associated with serious or life-threatening illnesses.
- .

Contraindications to step-1

- Adult: no general contraindication
- Children:
- avoid aspirin in< 16 yrs
- metochloramide not recommended
- prochlorperazine not recommended

Progression to next step

- Failure on three occasion
- Different type of attack
- Different severity

Drug treatment: principles

- Individualized
- -- a standard set not possible.
- Tailored to response
- - -- minimum side effect
- Single agents
- Combinations :abort side effect,severe attack

Drugs:3 groups

Analgesic/anti inflammatory

- Analgesic/NSAIDs :NSAIDs+ antiemetic .

5HT agonists

- Triptans:Triptans PLUS
- Ergots

Dopamine antagonist:

- Metoclopramide
- Prochlorperazine

others:prokinetic:domperidone

Triptans

- **Sumatriptan**
- **Zolmitriptan**
- **Rizatriptan**
- Almotriptan
- Naratriptan
- Eletriptan !

Triptans

- Comparative efficacy
- Range of costs
- Individual variation in response
- Each Triptans should be tried thrice before rejection
- Response to dose and route differ in individual

Triptans

- Should be taken at start of headache phase
- Ineffective during aura
- All are associated with relapse in 20-50%
- Triptans plus antiemetic ~ additive
- Each has own maximum dose in 24 hr
- Only sumatriptan is available in Sc form

Ergotamine

- Significant lower relapse
- Prolonged duration of action
- Drug of choice in relapse cases
- Better taken rectally
- Should not be taken concomitant with triptan
- Should not be taken with betablockers

Contraindication to step-3

- Uncontrolled HTN
- Advanced age
- Risk/history of Coronary disease
- Risk/history of Cerebrovascular disease

Migraine complicated

- Migraine emergencies
- **Treatment of relapse within same attack after initial efficacy**
- **Patients who consistently experience relapse**
- Status migranous

Migraine emergencies

Drugs

- Sumatriptan -6mg Sc
- Diclofenac 75mg im ±chlorpromazine/prochlorperazine/metochlopramide
- Prophylactic chlorpromazine suppositories
- I/V fluid
- Early followup

difficulties

- May be done at home/ER/Accident room
- No Narcotics
- No Triptan if used in current attack
- Look for contraindications of Triptans

Treatment of relapse within same attack after initial efficacy

- Non triptans:Repeatation of step1,2 within dose limitations
- Triptan-2nd dose of particular Triptan-within 2hrs of doses and within total daily dose-no good evidnce,rebound should be remembered
- Naproxen 500mg may be preferable for 1st relapse
- Ergotamine tartrate:should not be use within 12 hours of triptan

Patients who consistently experience relapse

- More in those whose untreated attack last longer than 24 hrs
- Triptans:some have apparent low recurrence-not reliable
- Ergotamine- is a fall back option
- Naproxen-may be used preemptively

Long duration migrain

- Status miganous:migraine lasting longer than 3 days
- ?With a superseding tension type headache
- Naproxe or diclofenac preferable
- ?Repeated dose of triptan cause multiple relapse

Special situations

- Slowly developing migraine
- Menstrual migraine
- Migraine in pregnancy and lactation

Slowly developing migraine

?Uncertain about migraine

- Simple analgesic
- Avoid triptan until certain

Menstrual migraine:Catamenial migraine

- **Menstruation related migraine:**Attack at day 1±2 days of menses
- Additional attacks at other times of cycle
- minimum 3 menstrual cycles
- Migraine without aura
- Affect 50% of women
- **Pure menstrual**-10% migraine
- Estrogen withdrawal triggers migraine

Menstrual migraine

- No concern of medication overuse

- Needs treatment for longer duration

- Simple analgesic not needed >15days@a month
- Codeine containing analgesic/ergot/triptan not needed >10 days@ a month

Migraine in pregnancy and lactation

Pregnancy

- Paracetamol –safe
- Aspirin,NSAIDs safe except 3rd trimester
- Metoclopramide,domperidone-safe
- Triptan-unsafe
- Ergotamine/dihydroergotamine-contraindicated

Lactation

- Paracetamol –safe
- Aspirin,NSAIDs safe
- Triptan-withhold breast feeding 24 hrs
- Ergotamine/dihydroergotamine-contraindicated

Combinations

- Combination of sumatriptan 50 mg with naproxen 500 has synergistic effect
- Step one plus three is worth trying
- Step two plus three may be tried

New combination: **Sumatriptan combined with naproxen sodium**

- — A proprietary formulation of sumatriptan succinate 85 mg plus naproxen sodium 500 mg in a single tablet appears to be more effective than either agent as monotherapy for acute migraine.

- At two hours after dosing, the combination of sumatriptan plus naproxen was more effective than placebo or sumatriptan alone for
- *headache relief (defined as reduction of pain from moderate or severe intensity to mild intensity or no pain without use of rescue medication*

Acute standard therapy plus parenteral dexamethasone

- a meta-analysis of seven randomized trials conducted in emergency departments or headache clinics
- *All patients (n = 738) received standard abortive migraine headache treatment, and were also randomly assigned to treatment with either a single dose of dexamethasone (intravenous or intramuscular, 10 to 25 mg) or placebo.*
- In the pooled results, dexamethasone was significantly more effective than placebo for reducing migraine recurrence from 24 to 72 hours after treatment

Medication overuse headache (MOH),

*Acute medications should be limited to no more than 10 days per month

**Preventive therapies should be used as the mainstay

What to avoid

- Long-term use of codeine-containing analgesic
- Morphie,apomorphine

  ----------Vomitting,addiction,MOH
- Ergotamine preparations should be avoided

  ---------dependence.
- Excess caffeine and alcohol, cheese, chocolate

  ----------Precipitates

Limitations of abortive therapies

- Over frequent use demand prophylaxis
- a.Tryptans >10day@a month,b.analgesics .15days@a month-risk MOH
- Use of either (a or b)@≥ 2 days a week-enquire compliance, review diagnosis

Prophylaxis: When to think?

1. Frequency of attack: Patients with five or more attacks/month.
2. Duration of symptom: The headaches last longer than 12 hours
3. Control of symptom: They account for a significant amount of total disability.
4. Prophylactic drug is used in addition to acute therapy not in place of it

Prophylaxis

- Indications;
- Dose titration:up titrated to maximum dose
- Duration:
- used for 4-6 months after once effect established then tapered over 2-3 weeks
- 6-8 weeks is a reasonable trial following dose titration
- 3 cycles in case hormone related migraine

Drugs for prevention

- Anti-HTN: Betablocker: Ca-channel blockers:ACEI/ARB: Lisinopril/candesartan
-
- TCA: Amitriptyline (10-75 mg at night), nortryptyline (25-75mg)
-
- Anti-convulsants:sodium valproate (300-600 mg/day) or topiramate (50-200 mg/day) or gabapentin (900–3600 mg qd)
- Others:
-

Drugs for prophylaxis

- *Evidence based efficacy*

1st line drugs

- Good-Betablockers,topiramate,valproate
- Adequate-Amytriptyline
- Poor-for others

Betablockers

- Atenolol 25-50 mg bd> Metoprolol 50-

100mg bd> Propranolol LA 80mg od-160mgbd

Bisoprolol 5-10mg od may be of choice but better evidenc needed

Amytriptyline

10-150 mg daily at or 1-2 hrs before bed time is first line when migraine coexists with

- Tension type headache
- Another chronic pain condition
- Disturbed sleep
- depression

Desipramine,nortriptylline,protriptylline needs evidence

Drugs for prophylaxis

- 2nd line

Topiramate 25mg od-50mgbd and Na-valproate 300-1000 mg bd

Not indicated in pregnancy

Drugs for prophylaxis

- 3rd line
- Gabapentine 300mg od to 800 mg tds-lacks evidence
- Methysergide-reserved
- Betablockers+amitriptylline-needs evidence

Drugs for prophylaxis: with uncertain efficacy

- Pizotifen (0.5–2 mg qd)
- Clonidine,verapamil
- Lisinopril,candasartan
- montelukast
- Coenzyme Q10
- Magnesium
- Riboflavin
- opioid

- Serotonergic drugs: Flunarizine *(5–15 mg qd),* Methysergide

OnabotulinumtoxinA

>15 headache days/month,with at least 8 days are with migraine**needs more clinical trials

Limitations of prophylaxis

- Contraindicated:Combined hormonal contraceptives
- Failure of prophylaxis:omit prohylaxis

Prophylaxis in special situation

- In Children:not needed
- In pregnancy and lactation:does not need
- Migraine and HRT:not contraindicated

Non drug intervention

- Physical
  therapy:fitness/physiotherapy/acupuncture/dental Rx
- Psychological therapy
- Homeopathy
- Others;

Surgery!

Surgical removal of muscle or nerve tissue from headache "trigger sites".

Frontal trigger site-glabeller muscle,s Temporal trigger sites-(zygomaticotemporal branch of the trigeminal nerve),occipital trigger- semispinalis capitis .

- The surgery was well-tolerated including complete elimination of migraine headaches (57 versus 4).

Duration & when to stop Rx

- Many patients are able to discontinue medication and experience fewer and milder attacks for long periods
- Can natural history be Changed ?

Yes

Conclusion

- Correct and timely diagnosis
- Explanation and reassurance
- Drug and non drug intervention:tailored to individual, symptom and type of migraine

Message

- Attitude &Expectation should be positive
- Cure not realistic
- Disease course can be changed