**Current migraine prevention and management**

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**MIGRAINE IS COMMON**

- No reliable specific migraine data for Australia  
- Population of 24.64 million (2017)  
- Assuming mean prevalence of 11.2, then 2.76 million Australians have migraine.

Ref: 1. Steiner TJ et al. Lifting the Burden

**EVEN WORSE, MIGRAINE IS DISABLING**

- Results from the Global Burden of Disease Study 2015:  
  - Migraine is the second most disabling disease overall  
  - It is the greatest cause of disability adjusted life years (DALY), under the age of 50  
  - Migraine impairs ability to function, work and maintain relationships  
  - There is an increased rate of anxiety, depression and other comorbidities  
  - We routinely measure headache days, but aura, premonitory and postdromal symptoms also impair people.

**PRINCIPLES OF MIGRAINE MANAGEMENT**

- **Goals**
  - **1.** Improvement in headache burden by reducing:  
    - Headache days  
    - Headache duration  
    - Headache intensity and severity  
  - **2.** Benefits occur over time and cannot be expected immediately  
  - **3.** Acute treatment: “when needed”  
    - Aim to be headache free within 1-2 hours and back to usual activities within 4 hours  
    - Secondary aim to not have recurrent headache within 48 hours  
  - **4.** Prophylactic treatment:  
    - Aim to reduce the frequency of attacks & the degree of disability


**ACUTE TREATMENT**

- If nauseated, need absorption of other oral medications- antiemetic  
- NSAIDs  
- Triptans  
  - “Relative failures” - not appropriate to use narcotics regularly; but some need strong analgesics or suppositories on rare occasions
PROPHYLACTIC TREATMENT
• Strategies for every day to decrease the frequency and severity of the migraines
• Consider lifestyle issues to target
• Hormonal management (not first line)
• Nutriceuticals: natural prophylactic medications; check for deficiencies
• Medication prophylaxis
  • If more than 3 significant migraines a month
  • Difficult to treat migraines or too frequent
  • Current choices largely dependent on interactions and side effects
  • Current compliance limited by tolerability, interactions and efficacy

REALISTIC EXPECTATIONS: WHAT IS HALF OF A LOT?
• Diary for objective measurement, as important for the patient as for the doctor
• Ideally captures frequency and severity in a simple to read way

Acknowledgement: Dr Paul Spirtas, Aspen Headache Diary

“NOTHING WILL WORK”
Consider:
1. Diagnosis is incomplete or incorrect
2. Important exacerbating factors have been missed
3. Pharmacotherapy has been inadequate
4. Non-pharmacologic treatment has been inadequate
5. Other factors, including unrealistic expectations and comorbidities

“MOST” PROJECT
• 28 health care networks, mainly in Europe and 3 in Australia
• Different models (right image)
• Findings:
  – New patients waited more than 3 months in 61%
  – Average waiting time was 4 months for initial appointment (mean ± 2 months)
  – Follow ups waited more than 3 months in 36%
• Recommendations included:
  • A “network” approach to bridge different levels of care
  • Consistency in practice amongst specialist clinics
  • Integrated with primary care

“ISN’T IT JUST A TENSION HEADACHE?”
Episodic migraine

“BEACHES” study in 2007, regarding GP management:
• Migraine is recognised frequently in Australian general practice
  • Prevalence was 14.9% in females and 6.7% in males.
  • Majority had one or fewer attacks per month (77.1%; 12.3% had three or more per month)
• Use of acute medication often follows published guidelines
  • 60.6% of the acute medications were recommended; but opioids were 38% of acute medications
• Prophylactic medication appears to be underutilised, especially in patients with frequent migraine
  • Only 8.3% (4.8%) of migraine patients were currently taking prophylactic medication.
• A limited range of therapeutic options for migraine prophylaxis
  • The most common prophylactic agent used were pizotifen and propranolol; others were rarely used
• Some GPs used inappropriate drugs for migraine prevention
  • Inappropriate use of acute medications accounted for 9% of “prophylactic treatments”

Ref: Lipton RB, Silberstein SD, Saper JR, Bigal ME, Gaodsby PJ. Neurology April 2003

MIGRAINE MANAGEMENT IN AUSTRALIA: PRIMARY CARE
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Ref: Stark RJ, Valenti L, Miller GC. “Management of migraine in Australian general practice” MJA 2007; 187(3):142-6

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The “BEACHES” study was a large-scale, prospective, observational study conducted in 2007 to evaluate the management of migraine in Australian primary care settings. The study aimed to assess the prevalence of migraine, patient characteristics, and the use of acute and prophylactic medications. The findings highlighted that migraine is a prevalent condition in Australia, with a significant percentage of patients having multiple attacks per month. The study also revealed deficiencies in the management of both acute and prophylactic medications, with a high proportion of patients not receiving appropriate treatment. The results underscored the need for improved education and guidelines for the management of migraines. This study provided valuable insights for healthcare providers and contributed to the development of strategies to improve the management and treatment of migraine in primary care.
DIFFERENTIATING TENSION TYPE HEADACHE FROM MIGRAINE

Chronic migraine

1. Other causes of headache are due to the interaction of headache variability, psychosocial issues, and coexisting illnesses.

2. Nonspecific factors: Experiencing a headache for more than 10 years, use of more than 7 per month of triptans, and other medications.

3. Various factors may contribute to the increased headache, including stress, fatigue, and sleep disruption.

4. The diagnosis of chronic migraine is made when a patient has headaches that are present more than 15 days per month for more than 6 months.

5. Chronic migraine is characterized by recurrent headaches that are often severe and disabling, with a duration of 4 to 72 hours.

6. It is important to differentiate chronic migraine from other headache disorders, as the treatment approaches may differ.

Tension type headache

1. Migraine

2. Other causes of headache

3. Nonspecific factors

4. Various factors

5. Chronic migraine

DIFFERENTIATING TENSION TYPE HEADACHE FROM MIGRAINE

MULTIFACETED APPROACH TO THERAPY


MANAGEMENT OF MEDICATION OVERUSE

1. Patient education

2. Withdrawal of overused medication

   - Abrupt better than gradual

3. Bridging therapy for withdrawal headache (4 days for triptans, 10 days for opioids)

   - Outpatient: NSAID (eg, naproxen SR 750mg or prednisolone)

4. Prophylactic

   - Best timing not yet clear

5. Monitor for relapse


PREVENTIVE TREATMENT MIGRAINE

• Preventive treatment can reduce migraine headache days, severity, and disability

• Initiate preventive treatment

   - In Germany, only 7% of individuals were treated with preventive therapy;

   - AAN working group found 13% of expected 38% were treated with prophylactics

• Individualize drug selection

   - Comorbid and coexistent illness/disorders

• Select preventive drug based on evidence when possible

• Combining 2 preventive drugs may be useful in selected cases

• A diary and/or disability measure are important to monitor response to therapy


OUR CLINICAL PRACTICE IN AUSTRALIA: USEFUL RESOURCES

• Electronic Therapeutic Guidelines, updated November 2017

   - Printable sheets

   - Diagnosis tips and red flags

   - Pharmacological management

   - specifics such as medication dosing and safety are all considered

HEADACHE THERAPEUTIC GUIDELINES

• Offers multiple options, without being an exhaustive list

• Dosing and titration are included

• States reasonable trial is 8-12 weeks; and if several medications are not effective then refer for expert advice
MIGRAINE: PREVENTATIVE DRUG TREATMENT

- Individualised choice largely on comorbidities, interactions and potential side effects

<table>
<thead>
<tr>
<th>Class</th>
<th>Generic name</th>
<th>Trade Name</th>
<th>Main Problems</th>
</tr>
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<tbody>
<tr>
<td>β blockers</td>
<td>propranolol</td>
<td>Inderal</td>
<td>Asthma, Raynaud's</td>
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<tr>
<td>Anti Serotonin</td>
<td>pizotifen</td>
<td>Sandomigran</td>
<td>Weight gain, drowsiness</td>
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<td>Peracten</td>
<td>Weight gain</td>
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<td>Ca ch blocker</td>
<td>topiramate</td>
<td>Topamax</td>
<td>Weight gain, reduced appetite, cognitive effects</td>
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<tr>
<td>Other anti HT</td>
<td>verapamil</td>
<td>Isotin</td>
<td>Variable efficacy</td>
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<tr>
<td>Tricyclics</td>
<td>amitriptyline</td>
<td>Endep</td>
<td>Dry mouth drowsiness</td>
</tr>
</tbody>
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BOTULINUM TOXIN

- Not dependent on muscle relaxation in Chronic Migraine
- Acts by modulating neurotransmitters
- Authority in Australia depends on having >15 days of headache a month; and failed 3 preventors.

PREEMPT PROTOCOL OF BOTOX FOR CHRONIC MIGRAINE

155 units injected in 31+ sites over the course of nerves, such as supraorbital, supratrochlear, auriculotemporal and occipital nerves

EMERGING TREATMENTS

- CGRP monoclonal antibodies
  - Erenumab recently approved by TGA (PBS status pending); Galcanezumab, Fremanezumab, Eptinezumab
  - SCI or IV administration
  - All phase II/III trials have been +ve in EM and CM, including primary endpoint of >50% response rate
  - Steeper response curve, compared to usual slow response (still worth 3 months trial)
  - No significant side effects
  - No known interactions.
  - No short term safety issues, with limited data up to 3 years

SUMMARY

The important components of migraine management:
- Accurate diagnosis
- Patient education
- Nonpharmacological strategies including trigger management, lifestyle modification, and behavioral therapy
- Management of overuse of acute medications
- Use of both symptomatic and prophylactic drugs
- Headache diary and disability instrument can help to monitor response to treatment

Ref: Edvinsson L et al

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Also small molecule CGRP antagonists under development.