Migraine Prophylaxis

Background

Migraine headache (MH) is a common, debilitating neurologic disorder that affects approximately 18% of women and 6% of men in the United States.[1,2] Several medications have been developed with established efficacy as abortive agents in MH; however, they do not prevent future headaches and frequent or excessive use can result in medication-overuse headaches. To avoid the development of this condition most experts recommend limiting the use of acute medications to no more than 2 days per week.[3,4]

Although their mechanism of action is incompletely understood and tolerability is sometimes an issue, a trial of prophylactic therapy is recommended for patients with severe and/or recurrent headaches as it has been shown to reduce MH frequency by as much as 50%. Despite this, it is estimated that only 30% of patients utilize prophylactic therapies who might benefit from them.[5,6]

Key Points

- Prophylactic therapy should be considered in the following circumstances:
  1) Patients who suffer two or more attacks per month that produce disability lasting 3 or more days per month
  2) Patients with contraindications to, or who have failed acute therapies
  3) Use of acute medications more than twice per week
  4) The presence of uncommon migraine conditions, including hemiplegic migraine, migraine with prolonged aura, or migrainous infarction
- Drugs used as prophylactic agents include beta-blockers, tricyclic antidepressants, anti-seizure medications, NSAIDs, calcium channel blockers, and angiotensin blockade agents. Other agents in use include feverfew, magnesium, hormone therapy, SSRIs and riboflavin
- **Agents with proven efficacy and considered first-line include propranolol, timolol, amitriptyline, divalproex sodium, sodium valproate, and topiramate**[5,7]
- Start with lower doses and titrate slowly; long-acting formulations are helpful for improving adherence; a trial of at least 2 months of consistent use is necessary to establish efficacy
- When possible, patient comorbidities should be taken into account when selecting a prophylactic agent

Pharmacologic Agent Comparison

DRUG	TYPICAL DOSE	ADVERSE EFFECTS	COST*
First-line Agents			
Amitriptyline (generic)	10-150 mg per day	Drowsiness, weight gain, anticholinergic symptoms	$3.66†
Divalproex Sodium (Depakote®, Depakote® ER)	500-1000 mg per day	Sedation, nausea, weight gain, hair loss, tremor, liver toxicity	$148.99
Propranolol or propanolol LA (generic)	80-240 mg per day	Fatigue, exercise intolerance, weight gain, dizziness, insomnia, depression	$13.99†
Timolol (generic)	20-30 mg per day	Fatigue, exercise intolerance, weight gain, dizziness, insomnia, depression	$28.60†
Topiramate (Topamax®)	50 mg twice daily	Paresthesia, fatigue, nausea, anorexia	$212.99
Second-line Agents			
Gabapentin (generic)	1200-2400 mg per day	Dizziness and somnolence	$89.99†
Naproxen (generic)	550 mg twice daily	Nausea, vomiting, gastritis	$23.98†
Verapamil (generic)	240-320 mg per day	Dizziness, edema, constipation	$53.98†
Lisinopril (generic)	20 mg per day	Dizziness, cough	$10.99†
Candesartan (Atacand®)	16 mg per day	Dizziness, fatigue	$49.99
Vitamin B_2 (Riboflavin)	400 mg per day	Diarrhea, polyuria	$8.99
Feverfew	100-250 mg per day	GI upset	$6.39

*Monthly cost per www.drugstore.com for higher end of dosing range
†Generic available (cost provided)

References

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