

patients; therefore, one of the most important aspects of therapy is the monitoring of amounts of analgesic used. In patients who are nauseated, it is often helpful to prescribe an anti-emetic agent early in an attack. Phenothiazine drugs have antiemetic, prokinetic, and sedative properties, but they can produce involuntary movements as an acute adverse effect (acute dystonic reaction) or with prolonged use (tardive dyskinesias).

A number of *migraine-specific* serotonin agonist drugs have become available. These agents, commonly referred to as “triptans,” are useful in the acute treatment of migraine, having a rapid onset of action. The increasing availability of non-oral (parenteral, inhaled, and transdermal) preparations has largely circumvented the problem of emesis and gastroparesis in migraine patients resulting in greater efficacy. For instance, sumatriptan, available as a subcutaneous preparation, results in a headache response rate of close to 70% (Fig. 111-1). Although triptans are highly effective in alleviating migraine, patients must be carefully instructed in their appropriate use. Moreover, a response to these medications does not confirm a diagnosis of migraine.

### Treating Acute Migraine in the Emergency Room

Migraine is one of the most common reasons for emergency room visits and presents some treatment challenges; typically migraine is more difficult to treat once it is fully established. It is essential to confirm that the diagnosis is accurate, even in patients with an established history of migraine. Patients will usually be aware that the headache will have started as their typical migraine, although it may be more severe than usual. In patients who state that the new headache is different to their usual headache, consideration should be given to exclude a more sinister cause.

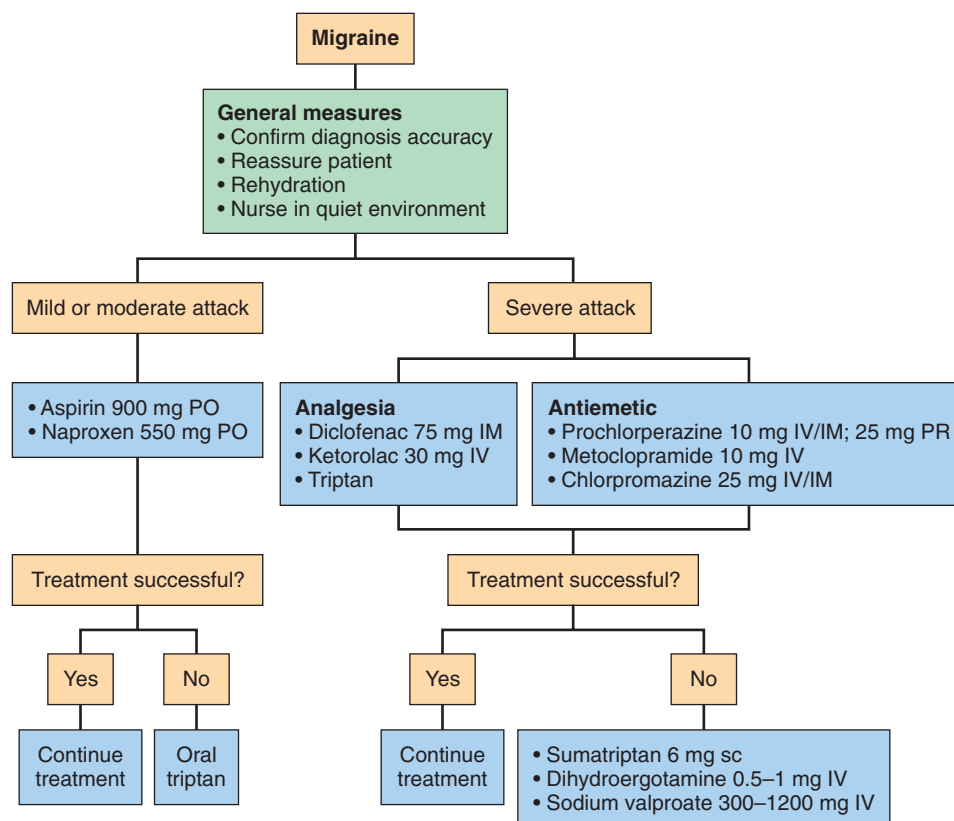
Thereafter the core principles of treatment include reassurance that the headache can be treated effectively, hydration, pain control, and relief of accompanying symptoms such as nausea and photophobia. The majority of patients presenting with acute migraine as an emergency will have already tried some form of abortive therapy, and they are likely to be dehydrated. In this setting parenteral therapy with an NSAID, a triptan, and an anti-emetic is often effective (Fig. 111-1)

### Migraine Prevention

Several agents have a strong evidence base for efficacy in the prevention of migraine (Table 111-6). The use of these agents should be restricted to patients who have frequent attacks (usually more than four per month) and who are willing to take daily medication. With any of the medications, an adequate trial period should be given, using adequate doses, before it is declared ineffective. Combination therapy is occasionally required but is not routinely prescribed. For a preventative drug to be considered successful, it should reduce the headache frequency rate by at least 50%. Other medications commonly used for migraine prevention include gabapentin, cyproheptadine, methysergide, and clonidine, but these have limited evidence to support their use as first line therapy. Magnesium supplementation, the plant extract feverfew, butterbur, and high-dose riboflavin (vitamin B<sub>2</sub>) have been effective in some patients.

### Future of Migraine Treatment

The most significant recent advance in acute migraine treatment relates to calcitonin gene-related peptide (CGRP) receptor antagonists. Stimulation of trigeminal ganglia neurons results in



**FIGURE 111-1** Algorithm for the treatment of migraine. DHE, Dihydroergotamine; IM, intramuscular; IV, intravenous; NS, normal saline; NSAIDs, nonsteroidal anti-inflammatory drugs; SC, subcutaneous.