INFORMATION FOR HEALTH CARE PROFESSIONALS

Triptan Therapy for Acute Migraine

John Farr Rothrock, MD
University of Alabama at Birmingham, Birmingham, AL

Deborah I. Friedman, MD, MPH
University of Texas Southwestern, Dallas, TX

The "triptans" are 5HT-1B/1D receptor agonists that were developed to treat acute migraine and acute cluster headache. Sumatriptan, the original triptan preparation, has been in general use since 1993, so there has been considerable experience with triptans over time. There are currently seven oral triptans on the market in the United States: sumatriptan (Imitrex™), naratriptan (Amerge™), zolmitriptan (Zomig™), rizatriptan (Maxalt™), almotriptan (Axert™), frovatriptan (Frova™), and eletriptan (Relpax™); brand names may differ by country. There is also a combination preparation of oral sumatriptan/naproxen (Treximet™). Two triptans (sumatriptan, zolmitriptan) are marketed as nasal sprays, and sumatriptan is available for subcutaneous injection, including a needle-free subcutaneous delivery system (Sumavel™). Sumatriptan suppositories are marketed in Europe but not in North America. Zolmitriptan and rizatriptan are sold in an oral disintegrating tablet or "melt" formulation as well as in tablet form; while the "melt" formulations may be more convenient (no liquid is required to propel them into the stomach), they are absorbed similarly to regular tablets and there is no evidence to suggest that they work faster than the tablet formulations. Some patients with migraine-associated nausea prefer the disintegrating tablets while others cannot tolerate their taste.

Although all of the triptans initially were investigated for the treatment of migraine headache of moderate to severe intensity and were superior to placebo in those pivotal trials, they appear to be more consistently effective when used to treat migraine earlier in the attack, when the headache is still mild to moderate.

Ideally, triptans should be used as follows:

Take one dose for early/mild headache. This dose may be repeated after two hours. Do not use more than two doses within a 24-hour period. Triptans may lead to medication overuse headache and should not be used more than 2-3 days weekly on a chronic basis.

The triptans have varying onset and durations of action. A non-oral formulation, such as a nasal spray or injection, is recommended for patients with severe nausea and vomiting, those who awaken with a full-blown migraine, or those with a rapid escalation of pain intensity. Frovatriptan, almotriptan, rizatriptan, naratriptan and sumatriptan/naproxen were found to be effective for use in menstrual migraine in clinical studies.

Different formulations of the same triptan may be taken within a 24 hour period. Some patients may achieve better relief by initiating therapy with a nasal spray or injection, then using a tablet for subsequent dosing. Nonsteroidal anti-inflammatory medications, opioids, and antiemetics may be used concurrently with triptans. Ergotamine and dihydroergotamine cannot be taken on the same day as a triptan.

Potential side effects of the triptans include nausea; jaw, neck or chest tightness, pressure or squeezing; rapid heart rate; fatigue; numbness-tingling (especially involving the face); or a burning sensation over the skin. While these and other side effects are not uncommon, the triptans are a very safe class of medications when used appropriately by the patients for whom they are indicated. The risk of serotonin syndrome in patients taking SSRI/SNRIs is very low (see fact sheet on Serotonin Syndrome).

The triptans are not effective for *all* migraine patients and will not stop *every* headache even in those patients who do benefit from the drugs. Furthermore, if the patient's response to a triptan is less than desired, it is worth trying a different triptan.

Contraindications to the use of the triptans include coronary artery disease, a history of stroke, peripheral vascular disease and chronically uncontrolled high blood pressure. Triptans are considered category C in pregnancy, so the risks and benefits must be weighed for each patient. Although they are not all officially indicated for use in children or adolescents, experience and published studies suggest that they are safe and effective in this population.

References

1) Loder E. Triptan therapy in migraine. NEJM 2010 Jul 1;363(1):63-70.
MacGreagor EA. Prevention and treatment of menstrual migraine. Drugs. 2010;70(14):1799-818.

2) Vollono C, Vigevano F, Tarantino S, Valeriani M. Triptans other than sumatriptan in child and adolescent migraine: literature review. Expert Rev Neurother. 2011;11(3):395-401.