Migraine Myth of the Month

The triptans are potentially dangerous drugs

The first "designer drug" for migraine treatment, injectable sumatriptan (Imitrex), was approved by the FDA for general clinical use in this country in 1992. Because sumatriptan and its various triptan cousins can exert a constrictive effect on cranial and coronary blood vessels, from the very start there has existed the concern that in susceptible individuals these drugs might produce spasm of the arteries that supply the brain and the heart… resulting in stroke or heart attack (myocardial infarction=MI). In the initial large scale clinical trials evaluating injectable sumatriptan, migraine patients who had a clinical history of vascular disease or possessed multiple risk factors associated with atherosclerosis and thus were at a higher risk of stroke or MI were systematically excluded from participation.

As commonly happens, the protocol used for those clinical trials eventually wound up serving as the basis for the "product insert" or "label" for injectable sumatriptan when it was approved for general use. In turn, that initial protocol became the template for research involving oral and intranasal sumatriptan and, ultimately, the product label for them and the long parade of other triptans that would follow.

Such pharmacologic inertia can be unfortunate, especially if the scientific evidence to support the exclusion of given populations from the so-called registration trials was thin or lacking altogether. To compound the problem, the FDA is extremely reluctant to change the wording of labels even when there is abundant clinical evidence to indicate that the concern leading to the exclusion of many patients from potential treatment is misplaced.

So it has been for the triptans. Despite millions and millions of usages of the triptans via the various injectable, intranasal, inhaled and oral formulations, no signal has arisen to suggest that triptan therapy is associated with a discernible increase in the risk of stroke or MI. Meticulous evaluations of huge databases maintained by the National Health Service in the United Kingdom have not demonstrated any correlation between triptan use and the incidence of vascular complications. This extends even to patients with medical histories or vascular disorders who would be excluded from treatment if adherence to the label was strictly observed.

In the very few cases where stroke or MI has occurred in close temporal relationship to administration of a triptan, the majority of those cases have involved individuals without any clinical history of vascular disease or an unfavorable atherosclerotic risk factor profile, and in large population studies the (low) incidence of stroke in migraine patients using triptans has not exceeded what would be expected in the general migraine population. Migraine is associated with an increased risk of stroke, especially in females who have migraine with aura and are using an estrogen-based oral contraceptive, but that risk is not known to be further increased by triptan use.

The triptans are not perfect. Many migraineurs do not find them to be effective for acute migraine treatment, and they often are not consistently effective even in those migraineurs who do find them helpful at times. They may cause side effects that prohibit the migraineur from using them even when they are effective for headache relief. Amongst those side effects are chest pressure, jaw tightness and neck squeezing, all clinically benign but nevertheless annoying and understandably alarming if the patient has not been forewarned by his/her provider that the side effects may occur and do not indicate impending MI or an anaphylactic reaction.

In the end, however, the triptans represent a very benign class of medications in terms of their safety, and without question they have made a tremendously positive impact on quality of life for many migraineurs while at the same time initiating nothing less than a revolution in our understanding of migraine and its treatment.