Triptans

Triptans are a class of medicines used to relieve migraine attacks and cluster headaches. They are generally used when standard painkillers such as paracetamol or ibuprofen are not effective. You should take a triptan as you start to feel a migraine headache develop and NOT before this, as they may be less effective if taken too early in a migraine attack. Side-effects associated with triptans are generally minor.

What are migraine and cluster headaches?

Migraine is a condition that causes attacks (episodes) of headaches, and often other symptoms such as feeling sick (nausea) or being sick (vomiting). Between migraine attacks, the symptoms go completely, but a migraine can last anything from an hour to several days.

Cluster headaches are attacks of severe one-sided pain in the head, usually centred in or around one eye or temple, which occur in groups or clusters. The pain is extremely severe and can be accompanied by eye watering, eyelid drooping and facial sweating on the affected side. Cluster headaches usually last 45-90 minutes.

This leaflet is about triptans, which are medicines used to treat migraine attacks and cluster headaches. It is assumed that you have some general knowledge about migraine or cluster headaches but would like to know more about triptans. See separate leaflets called Migraine and Cluster Headaches.

What are triptans?

Triptans are a group (class) of medicines that are used to ease the symptoms of a migraine attack or cluster headache. They include almotriptan, eletriptan, frovatriptan, naratriptan, rizatriptan, sumatriptan, zolmitriptan, and come in various different brand names. They are also known as 5-HT1 agonists. They come as tablets (both to be swallowed and in dispersible form), as an injection and as nasal spray preparations.

What causes migraines and cluster headaches?

The cause of migraine attacks (episodes) is not absolutely clear. A popular, long-standing theory, known as the vascular theory of migraine, suggests that the process begins when, following a trigger of some kind, blood vessels in one part of the brain or brain surface temporarily squeeze down (constrict) and become narrower. This temporarily reduces blood flow, causing the aura that sometimes occurs with migraine. The blood vessels then open wide (dilate) afterwards, causing a rush of blood to the affected area (to compensate for the period of reduced flow). This increased flow stretches the tissues (particularly the tiny veins) and accounts for the headache. This theory is not a perfect explanation. Other researchers have suggested that various migraine 'triggers' release molecules called 'free radicals' in the brain, which directly stimulate pain pathways.

The cause of cluster headaches is even less clear, as there is often no obvious trigger. One theory is that a part of the brain called the hypothalamus becomes overactive during each attack, and releases chemicals (neurotransmitters) which stimulate nerves and open wide (dilate) blood vessels to cause the symptoms. Widening of blood vessels is also thought to cause the symptoms like eye watering, as the widened blood vessels press on the nerves that look after sensation to the face.
How do triptans work in migraines and cluster headaches?

Triptans work by imitating the action of a brain chemical called 5-hydroxytryptamine (5-HT). 5-HT is also known as serotonin. 5-HT gives instruction to cells by attaching to specific sites (receptors) on the outside of them, rather like a password triggering a computer programme or a key opening a lock. One of the effects 5-HT has is to cause widened (dilated) blood vessels to narrow (constrict).

Triptans act as mimics of 5-HT: they attach themselves to the same receptors as 5-HT and trigger the narrowing of the widened blood vessels which are thought to occur during a migraine. They may also reduce the release of other brain chemicals that occurs during a migraine attack.

Triptans should be used when the migraine headache has begun, not to prevent one from coming on, and not during the aura (if you have one). Taking a triptan too early in a migraine attack may not work. You should wait until you feel mild discomfort (usually, the beginning of the migraine headache) rather than taking the triptan too early.

Which is the best triptan?

There is no best triptan that suits everyone. All triptans would probably be effective in most people with migraine. Different people find different triptans the most effective. Side-effects also tend to vary slightly between the different types. It seems likely that people probably respond individually to each preparation, both in terms of effectiveness and side-effects.

This means that if the first triptan you try does not work so well, or causes troublesome side-effects, it is worth trying a different triptan. In some people, finding the right triptan may mean trying several. The British Association for the Study of Headache (BASH) recommends that you try each triptan for three separate migraine attacks before deciding to change to a different one.

If the triptan you try doesn't work for you, your doctor may also advise a change in the way in which the medicine is given in some cases. For example, if feeling sick (nausea) or being sick (vomiting) usually occurs during your migraine attack, medication that you don't have to swallow is likely to be more effective for you. Options include zolmitriptan nasal spray, rizatriptan melts (which melt against your gum), or self-administered sumatriptan injection. It is known that once you feel sick your ability to absorb medicines from your stomach is reduced.

Can I buy triptans or are they just on prescription?

Sumatriptan can be bought, without a prescription, from pharmacies, although only after an assessment by the pharmacist. Triptans should only be taken to treat migraine or cluster headache that has been previously diagnosed by your doctor, as there are other causes of headache besides migraine and cluster headache, and you need a diagnosis. The other triptans apart from sumatriptan are only available on prescription.

How do I use triptans?

In the case of migraine, you should take your triptan as you start to feel a slight headache develop, but NOT before this. Triptans taken by mouth are designed to work rapidly - within an hour or so. Injected triptans usually work in 10-15 minutes.

In the case of cluster headache you should take your triptan as soon as the headache begins. Injected and nasal triptans tend to work more quickly than tablets.

After you have taken the first dose:

- If the triptan worked to relieve your headache but then the headache returned later, you can repeat the dose after 2-4 hours. Each triptan has a maximum daily dose that you should not exceed. This will be written on the packet.
- If the triptan did not work at all, a second dose is unlikely to work, so do not take a second dose. The exception to this is zolmitriptan (2.5 mg), where an additional dose may be tried after two hours even if the first dose did not work. See the patient leaflet that comes in the medicine packet for details.

Who can and cannot take triptans?

A full list of people who should not take triptans is included with the patient leaflet that comes in the medicine packet. If you are prescribed a triptan, read this to be sure you are safe to take it. In particular, you should not take a triptan:

- If you have uncontrolled high blood pressure (hypertension).
- If you have, or are told you are at high risk of developing, cardiovascular disease (such as angina, or heart attack).
- If you have had a stroke or transient ischaemic attack (TIA).
- If you have coronary vasospasm such as Prinzmetal's angina (this is rare).
- If you are pregnant.
- When breast-feeding, unless you have taken the following into account:
• Traces of triptans are passed out in breast milk, so they should either be avoided during breast-feeding, or milk should be expressed and discarded for 12-24 hours after taking them (see manufacturer's information).

• Without advice from your doctor if you have certain kidney or liver conditions. A reduced dose is recommended for some triptans if you are affected by one or more of such conditions.

Triptans should not be taken at the same time as migraine treatments containing ergotamine, as the combination of the two could be harmful. If you stop taking a triptan you must wait before taking anything containing ergotamine. If you are taking ergotamine you must also wait before taking a triptan. This waiting period varies between 12 and 24 hours depending on the type of triptan. Speak to your doctor or pharmacist if this applies to you.

There are age restrictions on the use of triptans:

• Children younger than 12 years of age should not take triptans.
• Adolescents (aged 12-18 years) may be prescribed sumatriptan nasal spray (10 mg).
• Triptans are not licensed for people aged over 65 years.

What about risks?

Triptans are usually safe if you do not have any of the medical conditions mentioned above. Because these medicines can cause the constriction of blood vessels, they should not be given to people with heart or blood vessel problems.

If you take triptans too often, you increase your risk of developing medication-induced headache.

What is medication-induced headache?

Medication-induced headache (also called medication overuse headache) is caused by taking painkillers or triptans too often for headaches of any kind. It is a common cause of headaches that occur daily, or on most days. About 1 in 50 people develop this problem at some time in their lives. For example:

• You may have a bad spell of tension headaches or migraine attacks, perhaps during a time of stress. You take painkillers or a triptan more often than usual, and for a while. Your body becomes used to the medication. A withdrawal (rebound) headache then develops if you do not take a painkiller or triptan within a day or so of the last dose. You think this is another tension headache or migraine attack, and so you take a further dose of painkiller or triptan. When the effect of each dose wears off, a further withdrawal headache develops, and so on. In time, you may have headaches on most days, or on every day, and you end up taking painkillers or a triptan every day, or on most days.
• Because cluster headaches occur in repeated groups of attacks, often lasting several weeks, there is a risk of medication-induced headache if you need to use triptans very frequently. It is sensible to talk to your doctor about the possible risk of this, compared to the benefit of the triptans in treating your headaches. Most people with cluster headaches find them very disabling and they would be prepared to take the risk of medication-induced headache later in order to cure the pain of the cluster headache.

Some people who may think they are getting frequent migraine attacks are in fact getting medication-induced headache.

If you use painkillers or a triptan on more than two days per week on a regular basis, you are at risk of developing medication-induced headache.

You should talk to your doctor if you suspect that you may have medication-induced headache. See separate leaflet called Medication-induced Headache (Medication-overuse Headache).

What are the side-effects?

Most people who take triptans do not have any serious side-effects, but some side-effects are very common and they usually come on around the time the triptan starts to work.

Triptans can cause drowsiness. If drowsiness occurs, you should not drive or perform other skilled tasks while affected.

Common side-effects are feeling sick (nausea), dizziness and dry mouth. Triptans can also cause some people to experience strange sensations. These may include a tightness, tingling, flushing, or feeling of heaviness or pressure in areas such as the face and limbs, and occasionally the chest. Triptan sensations in the chest can mimic heart pains (angina) and may cause alarm. Whilst these sensations are not usually harmful, if you develop intense chest pain or sensations, you should consult a doctor immediately or go directly to the nearest accident and emergency department (you may need to dial 999/112/911 for an ambulance).

Other triptan sensations sometimes experienced include your skin becoming very sensitive to touch, loss of sensitivity to heat and cold, and hunger pangs. The nasal spray can make the lining of the nose sore, and the injection may cause soreness and tingling at the injection site. For a full list of all the side-effects and possible interactions associated with your medicine, consult the leaflet that comes with your medication.
How to use the Yellow Card Scheme

If you think you have had a side-effect to one of your medicines you can report this on the Yellow Card Scheme. You can do this online at the following web address: www.mhra.gov.uk/yellowcard.

The Yellow Card Scheme is used to make pharmacists, doctors and nurses aware of any new side-effects that medicines or any other healthcare products may have caused. If you wish to report a side-effect, you will need to provide basic information about:

- The side-effect.
- The name of the medicine which you think caused it.
- The person who had the side-effect.
- Your contact details as the reporter of the side-effect.

It is helpful if you have your medication - and/or the leaflet that came with it - with you while you fill out the report.

Further reading & references

- Diagnosis and Management of Migraine, Tension-Type, Cluster and Medication-Overuse Headache; British Association for the Study of Headache (BASH) Guidelines, (2010 - reviewed 2014)
- Headaches in over 12s: diagnosis and management; NICE Clinical Guideline (September 2012)
- Diagnosis and management of headache in adults; Scottish Intercollegiate Guidelines Network - SIGN (November 2008)
- Migraine; NICE CKS, May 2016 (UK access only)
- Headache - cluster; NICE CKS, November 2012 (UK access only)

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