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Review Article

ADVANCEMENTS IN MIGRAINE MANAGEMENT: DOCTORS TO PHARMACISTS INTERVENTION

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ABSTRACT
Migraine is a common disabling condition mostly in adult population and shows female predominance. Migraines are severe headaches that usually begin on one side of the head (often behind the eye) and spread to the whole head. Migraines can last from two hours to a few days. Migraines affect around one in 10 people. Most people who get migraines will have a family member with the same problem. This article reviews the path physiology, diagnosis and evidence based approach for management of migraine. Many patients with chronic migraine also have medication overuse, defined as using a compound analgesic, opioid, triptan or ergot derivative on at least 10 days per month. All doctors will encounter patients with chronic headaches. A basic working knowledge of the common primary headaches, and a rational manner of approaching the patient with these conditions, allows a specific diagnosis of chronic migraine to be made quickly and safely, and by making this diagnosis one opens up a substantial number of acute and preventive treatment options. This article discusses the current state of management of chronic migraine.

Keywords: Migraine, Clinical Features, Management, intervention

INTRODUCTION

Headache disorders, characterized by recurrent headache, are among the most common disorders of the nervous system. Headache itself is a painful and disabling feature of a small number of primary headache disorders, namely migraine, tension-type headache, and cluster headache.

Epidemiology

Headache accounts for 4.4% of all consultations in general practice, approximately 5% of all medical admissions to hospital, and approximately 20% of neurology outpatient consultations. Migraine affects over 20% of people at some point in their lives; epidemiological studies have shown that 4.5% of the population of Western Europe has headache on at least 15 days per month; global studies suggest that approximately 1% of the world's population may have chronic migraine. Chronic migraine imposes a substantial economic burden on society. Migraine is so common that, even though for many people it is no more than an inconvenience, the cumulative burden of the disorder caused it to rank in the top 40 conditions causing worldwide disability.

Pathophysiology

Migraine is now known to be a neurological process of the trigemino vascular system, rather than a vascular event. The vascular theory has been debunked for several reasons: Vascular changes do not explain the premonitory and other symptoms linked with migraine. Some useful migraine treatments have little effect on vasculature. According to blood flow studies, vascular changes only occur randomly in migraine attacks and do not correlate with the clinical features of the condition. Migraine is A neurochemical chain reaction that involves 5 distinct phases of a neurological process: prodrome, aura (may or may not be present), mild, moderate, or severe pain, and postdrome. Once the reaction is "triggered" (see causes in next section), fluctuation in neuronal activity may activate the trigemino vascular system in the meninges. Once activated, the trigeminal afferent can release various vasoactive peptides, producing an inflammatory response that probably causes head pain. In turn, the inflammatory response lowers the sensory threshold of the trigeminal afferents, increasing the flow of sensory traffic to the second-order neurons in the brainstem, especially the trigeminal nucleus caudalis. The sensory material is allowed to reach high centers of the thalamus and cerebral cortex – the central areas of pain perception. Migraine symptoms follow the escalating neuronal process. Migraine attacks tend to build in pain intensity and frequency over hours or days. The activation of the trigeminal system also explains facial pain and neck pain that can occur during migraine and that are often mistaken for symptoms of either a sinus or tension-type headache. Up to 20% of all migraine patients present with aura. It is believed that this is caused by cortical spreading depression with extensive glutamate release.

Symptoms

Migraine pain can be throbbing, pulsing or squeezing and it gets worse with movement and normal activities. Other symptoms include: a warning sign (aura) such as blurred vision, flashing lights, numbness, tingling and funny smells. Nausea and vomiting .A dislike for bright lights, a dislike for loud noises. The attacks may be few and far between, or

frequent and severe. Migraines are often unpredictable.

Treatment Approaches

The treatment of migraine and other primary headaches is not uniform but is proportioned to the severity of the symptoms and disability. Mild and infrequent symptoms may be initially treated with lifestyle modification, stress management techniques, and over-the-counter abortive medications. Prescription medications may be added as warranted to help thwart disability and maintain function. A distinction is made between prescription abortive and preventive medication in the management of headaches. Abortive medications are prescribed to treat an individual attack, and preventative medications are used to reduce the frequency and severity of the individual attacks, with the goal of reducing disability.

Non Pharmacological Treatment

Migraine is the most common type of headache leading patients to consult a physician. For most patients, a combination of non-pharmacologic and pharmacologic interventions should be used to control the headache disorder. William EA. et al has developed guideline for the non-pharmacologic management of migraine in clinical practice which includes the application of cold or pressure to the head, reduction of activity and of sensory input in a quiet or dark environment and attempts to sleep and are supplemented by the use of pharmacologic therapies when not adequate in isolation. Relaxation therapy, hypnosis, transcutaneous electrical stimulation, acupuncture, and occipital or supraorbital nerve blockade have also been used in the acute situation and are considered.

Pharmacological Treatment

The principles of abortive therapy of migraine headache is to do judicious use of analgesic considering the patient profile, headache intensity, side effects of the agent for the rapid and sustained relief of headache.

Acute Treatment

Aspirin (900 mg) is recommended as first-line treatment for patients with acute migraine. Ibuprofen (400 mg) is recommended as first-line treatment for patients with acute migraine. If ineffective, the dose should be increased to 600 mg. Metoclopramide (10 mg) or prochlorperazine (10 mg) should be considered for patient's presenting with migraine-associated symptoms of nausea or vomiting. They can be used either as an oral or parenteral formulation depending on presentation and setting. Triptans are recommended as first-line treatment for patients with acute migraine. The first choice is sumatriptan (50–100 mg), but others should be offered if sumatriptan fails. Combination therapy using sumatriptan (50–85 mg) and naproxen (500 mg) should be considered for the treatment of patients with acute migraine. Combination therapy using sumatriptan (50–85 mg) and naproxen (500 mg) should be considered for the treatment of patients with acute migraine.

Prevention of Migraine

Propranolol (80–160 mg daily) is recommended as a first-line prophylactic treatment for patients with episodic or chronic migraine. Topiramate (50–100 mg daily) is recommended as a prophylactic treatment for patients with episodic or chronic migraine. Amitriptyline (25–150 mg at night) should be considered as a prophylactic treatment for patients with episodic or chronic migraine. Candesartan (16 mg daily) can be considered as a prophylactic treatment for patients with episodic or chronic migraine. Amitriptyline (25–150 mg at night) should be considered as a prophylactic treatment for patients with episodic or chronic migraine. Sodium valproate (400–1,500 mg daily) can be considered as a prophylactic treatment for patients with episodic or chronic migraine. Prescribers should be aware that sodium valproate is associated with an increased risk of fetal malformations and poorer cognitive outcomes in children exposed to valproate in utero. For women who may become pregnant sodium valproate should only be considered as a prophylactic treatment when other treatment options have been exhausted. Botulinum toxin A is recommended for the prophylactic treatment of patients with chronic migraine where medication overuse has been addressed and patients have been appropriately treated with three or more oral migraine prophylactic treatments. Flunarizine (10 mg daily) should be considered as a prophylactic treatment for patients with episodic or chronic migraine

Novel Treatments

New Devices

Cefaly is an electrical stimulation device. The FDA says it's effective and has few risks and side effects when used properly. It may help people who have problems with drug side effects. You wear it like a headband across your forehead. You can use it every day, but not more than once a day: Apply the self-adhesive electrode to your forehead. Connect the headband to the electrode. This starts the flow of electricity to a nerve linked to migraines. You may feel a massaging or tingling sensation. Wear it for 20 minutes. It shuts off automatically. It's the first TENS (transcutaneous electrical nerve stimulation) device approved for treating migraines before they start.

CGRP Inhibitors

CGRP (calcitonin gene-related peptide) is a molecule involved in causing migraine pain. CGRP inhibitors are a new class of drugs that block the effects of CGRP. Erenumab (Aimovig) was the first medicine specifically approved to prevent migraine attacks. In 2018, fremanezumab (Ajovy) was also approved. With each,

you give yourself an injection once a month with a pen-like device.

Mild Anesthesia

SPG (sphenopalatine ganglion) nerve block. This short, simple procedure numbs the SPG, a group of nerve cells inside and behind your nose. It works because your SPG is linked to your trigeminal nerve, which is involved in these headaches.

Pharmacists' Role in Educating Patients

Many patients with migraine can attain meaningful reductions in headache frequency, intensity, and duration with appropriate medical management. This includes educating the patient about migraine and its causes, developing an individual treatment protocol, creating a rescue plan, and considering prophylactic options. Pharmacists can play a large role in all these steps. Community pharmacists, in particular, often interact with headache sufferers and are in an ideal situation to improve patients' understanding of migraine and promote effective management. The process to follow is brief and uncomplicated. When a patient asks "what can I take for my headache" asking a simple set of questions enables the pharmacist to help determine the true nature of their headache and whether they need to be under a physician's care. The key areas of interest for the pharmacist are: Effect of headaches on ability to function. Number of headache-free days a month. Symptoms beyond headache pain. Previous response to over-the-counter medications. The informal protocol below is a guide for community pharmacists on how to conduct a successful interaction with a headache patient. By applying these probing questions, a pharmacist can establish pertinent clinical information about the person's headaches and recommend the best course of action.

CONCLUSION

Migraine is common cause of headache, early diagnosis and prompt treatment of migraine enhances the quality of life; prevent conversion of episodic migraine to chronic migraine. As there is growing interest in pathophysiology, novel drugs targeting the different pathways are being discovered.

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