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Vertiginous Migraine

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Vertigo or hallucination of movement of self or surroundings is a **common** migraine symptom. Vertigo can occur in individuals along with the onset of the migraine headache or independently and is followed invariably by the typical headache. Particularly in younger patients, dizziness or vertigo may **predate** the onset of headaches entirely. Vertiginous migraine is often a cause of balance disorders. Attacks of migraine vertigo can last from a few minutes to several days

It is important to remember that Migraine disease is common, representing approx **13 % of the adult population** of the United States and is a well known vascular phenomenon. Meniere's disease, on the other hand, occurs in approx **0.2% of the adult population**. The cause is unknown. Meniere's disease is diagnosed with at least a triad of symptoms including hearing loss, characteristic vertigo spells and tinnitus in the affected ear. It is noted that in a small study of Meniere's patients, approximately 50% of those patients had migraine histories.

From the literature, between 27 and 42% of all migraine sufferers have reported vertigo spells. About one third of these patients experienced vertigo alone between the headaches, while the others noted vertigo occurred along with the aura of the attacks. In our practice, we have approximately **18% of all of our vertigo patients** (all types) reporting migraine headaches. The question is – is there a relationship?

Migraine Associated Vertigo (MAV) syndromes:
Migraine headaches are divided into 1: Migraine headaches without aura (80%) and 2: with aura (20%). The symptoms include headaches, vertigo or dizziness, nausea often with vomiting, imbalance and auditory symptoms. There is increased sensory amplification, such as hyperacusis and motion sickness in migraine sufferers.

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Fitting Hearing Aids - A 30 Year Perspective

By: J.P. Miller, M.S. CCC-A

The technological advances in the hearing aid field have been simply amazing. As I sat in my office recently, surrounded by 20 channel digital hearing instruments, TV link and remote Bluetooth devices, I began to think how different things were 30 years ago when I first began to dispense hearing aids.

Analogue signal processing was the only game in town then. It was basically signal in, linear amplification, and signal out. Shaping of the frequency response was mainly accomplished through earmold acoustics (ie air vents, horn effects) and adjustment of variable resistors in the circuit. Low and high cut potentiometers allowed you to cut or increase the gain in the low and high frequency channels.

Once the aids were fitted to the patients, it was their responsibility to manually adjust the volume controls to keep the sound as comfortable as possible. Well as you can image, the aids generally did not do well in noisy environments as the background noises usually overwhelmed the soft consonants. So typically patients would have to resort to taking their hearing aids out or turn them down so low in noisy places to survive. Expectations far exceeded actual hearing aid performances.

Then in the early 1990's digital hearing instruments began to appear in the dispensing arena. Algorithms began to process the incoming sounds in a way that helped users deal with background noise. Onboard programs allowed the users to change the hearing aid response by pushing a button. Directional microphone technology helped to deal with background noise.

Now the sophisticated algorithms change the hearing aid processing strategies automatically. Telephones (cell or landline phones) can now be easily coupled to hearing aids utilizing three different methods: Acoustic or telecoil responses, and finally Bluetooth™. Bluetooth™ is an open wireless protocol for exchanging data over short distances from fixed and mobile devices, creating personal area networks (PANs). It is a short-range communication system intended to replace the cables connecting portable and/or fixed electronic devices. Any Bluetooth™ compatible device (MP3 player, iPod, cell phone) can now be paired with the hearing aids. This technology is really terrific and people love it.

Dispensing new digital hearing instruments with all the accessories can be quite time consuming. It sure helps if patients are computer savy and most are now. I usually utilize my personal ipod unit to demonstrate the Bluetooth™ devices such as the Phonak TVLink. It demonstrates to the patient how easy the system can be setup and gets them immediately excited about the new technology.

Fine tuning of the hearing instruments can take several weeks to complete. The patient must adjust slowly to amplification in most cases and "learn" to hear all the new sounds. The new fitting software modules can be quite involved as well. When changes are made, they must be strategically planned so that positive outcomes can be achieved. The new technology gives the professional dispensers the tools to deliver a superior product to the patient. Unlike the older analog technology, the dispenser now must make daily decisions regarding adjustment features within the fitting software.

As chip technology continues to improve, who knows what's around the corner. I believe the internet will continue to shape consumers buying decisions. Extended wear hearing instruments will continue to gain market share. And finally Bluetooth™ technology will continue to be important as consumers demand more from all their mobile devices and hearing instruments.

The Audiology Professionals at CCENT

J.P. Miller, M.S. CCC-A
Years Fitting Hearing aids: 30
Beginning 9th year at CCENT

Ellen R. Wilsom, Au.D CCC-A
Years Fitting Hearing aids: 24
Years at CCENT: 23

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Basilar Migraine

Basilar Migraine, consists of two or more symptoms (vertigo, tinnitus, decreased hearing, ataxia, trouble speaking, visual symptoms with double vision, paresthesias or paresis) followed by a throbbing headache. Vertigo typically lasts between 5 minutes and one hour. In the differential are ischemic attacks and paroxysmal vestibular disorders accompanied by headache along with several other entities.

Benign Paroxysmal Vertigo of Childhood

This is a disorder of uncertain origin, possibly migrainous. This disorder consists of spells of vertigo and disequilibrium without hearing loss or tinnitus. The majority of reported cases occur between **1 and 4 years of age**, but this syndrome seems indistinguishable from benign recurrent vertigo in adults which is presently attributed to migraine, or so-called “vestibular Meniere’s”, which is also attributed to migraine.

Recurrent Vestibulopathy Syndromes

We have reported recurrent vestibulopathy consisting of **episodic vertigo** with or without migraine headache and features of Meniere’s Disease. There is no hearing loss in these patients. We feel that this disease is viral based. Approximately 6 % of all these patients went on to develop Meniere’s disease. In most, the disease was self limiting over a 6 year period.

Migraine Treatment

The management of migraine is divided into two categories – symptomatic and preventative. Prevention of the migraine headaches is important. Vertigo in association with the headaches is one of the **major causes** of accidents. In our practice, a 50% reduction in migraine headaches is marked improvement and a goal of therapy.

Prophylactic medication and **elimination of triggers** are important in Migraine management.

Patients are initially told to **abstain** from foods such as chocolate, cheese, alcohol and MSG containing preparations. Acute attacks can be treated and stopped (aborted) with various medications including Fiorinal, Midrin, and sumatriptan (Imitrex) and others.

For prevention: Patients are started on one of the following medications including topiramate, verapamil, a long-acting beta-blocker such as long acting **propranolol** (Inderal), or an antidepressant such as amitriptyline, calcium channel blockers, **acetazolamide** (Diamox) or venlafaxine. In some cases, patients will be prescribed diuretic or antihistamine preparations. Diamox has been particularly effective in treating patients with vestibular symptoms associated with migraine.

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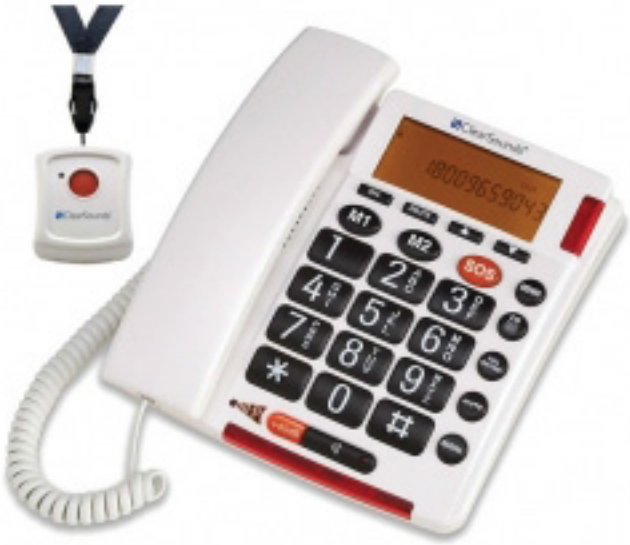

The Audiology Department is featuring this ClearSounds **amplified phone with waterproof personal pendant**. The remote control pendant can auto dial up to 30 pre-programmed numbers. No subscription fee is required for this service that can dial a telephone number in the event of an emergency. Think of the peace of mind and security you'll have with this superb device.

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