

Meclizine (Antivert) for Dizziness?

Most patients complaining of dizziness or vertigo have been prescribed meclizine at some point. For a medication that is so widely used, there is very little solid information available, creating potential for confusion regarding application and potential side effects. Meclizine is also packaged under the names Antivert, Bonine, and Dramamine II.

So many patients come in to our balance lab having received a prescription for meclizine, I am in the habit of asking them about perceived benefit. After listening to their symptoms (some of which include vertigo, nausea or motion sickness, but just as many do not), I ask them “What is it that the meclizine is treating?” The most common answer is “the dizziness.”

The term “dizziness” is very vague and can mean many different things. Patients use the term “dizziness” to describe vertigo, lightheadedness, disequilibrium and gait instability, oscillopsia (visual blurring with head movement), motion intolerance and disorientation. These are varied complaints with varied causes. Some types of dizziness can be helped by a temporary prescription of meclizine, many won’t be affected at all, and some could be made worse. In acute inner ear disease (such as Vestibular Neuritis/ Labyrinthitis or a Meniere’s episode), the acute vertigo is the result of asymmetries at the level of the labyrinth or vestibular nerve. The brain is trying to resolve the conflict between a healthy ear and an unhealthy ear sending different signals to the brain. The brain would rather receive no information from the inner ears than to receive conflicting information. The sedating qualities of meclizine can help reduce this conflict and reduce vertigo and nausea.

Medication taken to suppress vestibular symptoms ideally should be used only during the acute stage following vestibular insult, typically lasting three to five days in labyrinthitis and Vestibular Neuritis, and a few hours with a Meniere’s episode. In order for maximal recovery from a chronic vestibular weakness to take place, the brain eventually must be made aware that a conflict exists, so meclizine must be withdrawn.

In patients complaining of “dizziness” from non-vestibular issues, meclizine can compromise the information from

the vestibular system. These patients need all the accurate vestibular information they can get.

Meclizine and BPPV: A therapeutic dosage of meclizine creates a lasting sedating effect only to minimally reduce the intensity of symptoms of BPPV, which last only a few seconds at a time. Canalith Repositioning procedures (AKA Epley maneuvers) are extremely effective in relieving the symptoms of positional vertigo. BPPV does not resolve any faster, and likelihood of future episodes is not affected, by meclizine. The AAO-HNS Clinical Practice Guideline for BPPV released in 2008 recommends against the use of vestibular suppressants for BPPV.

What is Meclizine?

Meclizine is an antihistamine with anticholinergic properties. According to Drugs.com, the mechanism of action is described as: “Antiemetic; antivertigo agent— Exhibits CNS depressant, anticholinergic, antiemetic, antispasmodic, and local anesthetic effects in addition to antihistaminic activity.

- Depresses labyrinth excitability and conduction in vestibular-cerebellar pathways.
- Antiemetic and antimotion-sickness actions result, at least in part, from central anticholinergic and CNS depressant properties.”

The Physicians Desk Reference lists potential adverse reactions for meclizine, noting that “Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.” But what about functional impact? Could meclizine potentially make symptoms worse, or have other undesirable side effects?

Manning et al. explored the central nervous system effects of meclizine and dimenhydrat (Dramamine I). Their results “demonstrate that both dimenhydrat and meclizine, in recommended doses, produce drowsiness and impaired mental performance greater than placebo.” These authors attempt to “interpret the meaning of the observed decrement in test scores” by comparing their results to the effects of ethanol (alcohol): “Ethanol serves as a unique drug to reference degree of impairment because there are epidemiologic data that relate to blood alcohol concentrations with a known risk (.07 percent)

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for being involved in a traffic accident.” Comparison of the data demonstrates that the effect of dimenhydrate and meclizine on mental reaction time is equal to that observed while blood alcohol levels were .04 percent to .06 percent. (In most states, .08 is legally drunk). A more recent study found that long term use of anticholinergics has been associated with higher than average rates of cognitive deficit and dementia.

The use of centrally sedating medication may impede the benefits of vestibular rehabilitation therapy. Vestibular patients taking vestibular suppressants, antidepressants, tranquilizers and anticonvulsants ultimately achieve the same level of recovery as patients not taking similar medications, but the length of therapy needed tends to be longer.

The Bottom Line?

Meclizine is helpful for vertigo associated with sudden acute vestibular asymmetry due to Menieres disease or Vestibular Neuritis/Labyrinthitis, but should be withdrawn once the acute symptoms have diminished. It is not recommended for complaints of lightheadedness, unsteadiness, loss of balance, or dysequilibrium, whether of vestibular origin or not. Vertigo related to BPPV is better treated through canalith repositioning techniques.

Adapted from Meclizine-Condensed -hearinghealthmatters.org



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