

Rusty Lee
1/26/2009

P: In Patients with acute peripheral vertigo
I: Does the use of atropine/anticholinergics
C: Compared to benzodiazepines/Epley maneuver
O: Improve resolution of symptoms

Search Strategy

Cochrane, Medline: key words vertigo, anticholinergics, atropine, scopolamine, epley

Background information:

Currently multiple medications are used to treat vertigo. Classes include benzodiazepines, antihistamines, and antiemetics.

Case:

A 45yo male presents to the ED with a chief complaint of a "room spinning" sensation and vomiting since rolling over in his bed 1hr ago. He has nystagmus and is mildly ataxic but otherwise has a normal physical exam. He has a positive hallpike test. He denies trauma and has no other complaints. He has had something like this before but it resolved on its own after a couple of hrs.

Article	Patients	Study Type	Outcomes	Key Results	Weaknesses
<i>The Epley maneuver for benign paroxysmal vertigo</i> Hilton M, Pinder Cochrane review	Adults > 16yo, Clinical diagnosis of BPPV, Must have + Dix-Hallpike positional test with classic features of positional nystagmus	Analysis of 3 randomized control trials	Complete resolution or not. Conversion to +Hallpike to – Hallpike	All trials symptom outcome dichotomous variable all or none, Odds ratio of 4.22 (95% CI 1.96 to 9.08) Hallpike conversion: Odds ratio of 5.12 (95% CI 2.30 to 11.38)	Three small trials N=36 N=50 N=58 -Short follow up, weekly for one month, 2 weeks, and one month -No long term evidence -No direct trials comparing Epley maneuver to therapies -Natural course
<i>Intravenous lorazepam vs. dimenhydrinate for treatment of vertigo in emergency department: A randomized clinical trial</i> Marill, K. et al. 2000	74 patients age >17yo over approx. 1 year presenting with vertigo-hallucination of motion of self or surroundings	Prospective, randomized, double-blinded trial Lorazepam 2mg IV vs Dimenhydrinate 50mg IV	-sensation of vertigo with ambulation at 1 and 2 hours after treatment - Vertigo while lying, sitting, and turning head, ability to	-primary- "vertigo with ambulation" dec. 1.5 units more (95%CI 0-3) after 2 hrs for dimenhydrinate group -All other vertigo	-no placebo arm -vertigo subjective sensation (used a 10 pt scale) -multiple physicians and nurses evaluating patients

Annals of EM			ambulate as judged by physician, and sensation of nausea and drowsiness, and whether the pt was "ready to go home" at 2 hrs	measures were not significant -at 2 hrs 17% (95%CI -2-36) more pts were "ready to go home" in dimenhydrinate group -increased drowsiness in the lorazepam group	symptoms -underlying pathology not always known -greater pretreatment symptoms in the lorazepam group
<i>IV Atropine vs. IV Lorazepam for the Treatment of Peripheral Vertigo</i> Talbot, T. et al. 2003 Academic Emergency Medicine	19 pts with history consistent with peripheral vertigo (7 lorazepam, 12 atropine)	Blinded randomized control trial of 1mg lorazepam vs. 1mg atropine	Primary-ability to ambulate on a 4 pt ordinal scale at 30min Secondary-sedation level (NAS pre and post treatment)	29% of lorazepam group received rescue meds vs 0% atropine group, not significant Trend toward higher sedation scores with lorazepam, no significant difference in ability to ambulate or D/C time home	Small study No significant findings Poorly matched pt groups
<i>Transdermal scopolamine for peripheral vertigo</i> Rahko, T. et al. 1985 Finland	30 pts ages 20-51 outpatient Audiology clinic,	double blinded RCT 3 groups A-1 active patch and one placebo patch B-2 active patches patch C-2 inactive patches	Primary outcome subjective relief of vertigo at 1 week 4pt scale Secondary-drug tolerance on 4pt scale	Group A seemed to show greatest efficacy but not significant, Group B with most side effects (dry mouth, visual disturbances)	Small study No significant results Group C produced similar efficacy as group A

Clinical Bottom Line:

There is little evidence supporting the use of benzodiazepines or anticholinergics in acute peripheral vertigo. Based upon best available evidence (three studies N=144) the Epley maneuver appears to be most likely to produce patient relief and should be considered as first line intervention. Benzodiazepines, anticholinergics and antiemetics may provide some symptomatic relief though there is limited data on their efficacy. The evidence for use of intravenous atropine for acute BPV appears to be limited to a single abstract that included 19 patients.