What Therapies Are Effective for Relief of Chronic Vertigo Symptoms?

Veronita Crawford and José Rodríguez
What is the best initial treatment for phimosis?

Evidence-Based Answer
When treatment is necessary for phimosis, application of topical steroid seems to be an effective first-line treatment. (SOR B, based on a high-quality randomized control trial.)

Phimosis refers to difficulty retracting the prepuce secondary to a tight distal preputial ring. While relatively common at birth, this condition normally resolves spontaneously by 3 to 4 years of age. Over time, phimosis can lead to chronic inflammation, dyspareunia, or even penile carcinoma. Surgical treatment is often performed on boys suffering from persistent phimosis, but the procedure carries the risk of postoperative complications. Conservative treatment with topical steroids is a nonsurgical option.

In 2002, a prospective, randomized double-blind study examined 137 boys (aged 3–15 years) randomly assigned to receive either topical 0.1% betamethasone cream or placebo (aqueous cream) for 4 weeks. Patients were instructed to apply the cream twice daily, after retracting the prepuce as much as possible without causing harm and pain. After the 4-week assessment, all nonresponders in both groups were offered a course of steroid cream.

The first follow-up cure rate with steroid cream was 74% compared with 44% in the placebo group (number needed to treat=3; \( P<.01 \)). The overall cure rate was 86% by 18 months.¹

An unblinded, prospective cohort study enrolled 247 boys (treatment group) and 90 boys (placebo group) aged 4 to 14 years. In the treatment group, patients received 0.05% betamethasone cream applied twice daily for the first 15 days, then once daily for 15 more days. Preputial stretching started 1 week after topical application. A control group used preputial stretching only. Follow-up examinations were carried out at 10 days after the end of each 30-day treatment cycle. If initially unsuccessful, the treatment cycle could be repeated up to a total of 3 times.

Treatment with steroid creams plus stretching was successful in 96% of patients compared with 76% with stretching alone (\( P<.001 \)) after a maximum of 3 cycles. These results were maintained at 3- and 6-month follow-up visits.²

What therapies are effective for relief of chronic vertigo symptoms?

Evidence-Based Answer
It depends on the cause of the vertigo. For unilateral peripheral vestibular dysfunction, vestibular rehabilitation (VR) improves subjective dizziness. In benign paroxysmal positional vertigo (BPPV), canalith repositioning maneuvers are associated with excellent short-term relief. (SOR A, based on a systematic review.) In patients with Ménière’s disease, instruction in VR and symptom control are equally effective; the Meniett device can produce symptom relief in refractory cases. (SOR B, based on randomized controlled trials [RCTs].) Antihistamines, anticholinergics, benzodiazepines, diuretics, calcium channel blockers, and topiramate may also help relieve symptoms. (SOR C, based on expert opinion.)

Twenty-one RCTs including 1,383 adults with unilateral peripheral vestibular dysfunction were analyzed in a Cochrane review. Of those, 10 trials compared VR with control (placebo, no treatment, sham, or usual care). Four of the 10 studies had subjective improvement in dizziness as an outcome measure. All 4 studies showed VR is associated with subjective improvement in dizziness (136/278 patients in treatment groups reported

improvement vs 76/287 patients in control groups; P=.0001).¹

Five other studies compared VR with other treatments (including canalith repositioning maneuvers such as the Semont and Epley), with dizziness cure rate as the reported outcome. One of these studies was in patients with BPPV. Here, canalith repositioning maneuvers were better than VR (39/42 cured in the canalith repositioning maneuver group vs 18/29 with VR; odds ratio 0.13; 95% CI, 0.03–0.51; P=.004). Another study reviewed selected patients with BPPV and found the Semont maneuver to be superior to VR alone at 15 days, but at 3 months VR with the Semont maneuver was superior to either intervention alone. The Semont maneuver is performed by moving the patient into a lying position that provokes the vertigo for 4 minutes. The patient is then rotated to the opposite position for an additional 4 minutes, after which the patient rises slowly. The somewhat similar Epley maneuver involves a series of 4 movements of the head and body aimed at alleviating vertigo caused from displaced otoliths. Reported difficulties with these treatments include inability to tolerate the positioning maneuvers and emesis.¹

A 6-month RCT of 360 patients with vertigo from Ménière’s disease compared an intervention using self-help booklets on VR or symptom control to waiting list controls. Symptom control consisted of applied relaxation, controlled breathing, and cognitive-behavioral strategies to reduce the amplification of symptoms by anxiety. The study was not controlled for medication use. Patients were recruited by mail and were randomized to receive the VR booklet, the symptom control booklet, or to be on the waiting list. They were evaluated at 3 and 6 months after receiving the booklets, using the 36-item Vertigo Symptom Scale, short form (VSS-SF).²

At 3 months, 35% of both intervention groups reported symptom improvement, compared with 19.2% of controls (P=.006). At 6 months, 37.5% of the VR group and 39.2% of the symptom control group reported improvement compared with 15.8% of waiting list controls (P=.01 for each intervention vs the wait list; number needed to treat=5). No statistically significant difference was noted between VR and symptom control.²

A prospective cohort study of 21 patients with refractory chronic vertigo from Ménieré’s disease showed that of patients using a Meniett device, 71% had either relief or resolution of symptoms at 1 year, and 63% at 3 years. The Meniett device is placed in the middle ear with a myringotomy tube, sending pulsations to the inner ear. Side effects include otitis media and permanent perforation from placement of the myringotomy tube.³

Medical therapies are frequently tried, although no RCTs support their use for chronic vertigo. Experts recommend antihistamines (meclizine) to limit the nausea associated with vertigo. Anticholinergics (scopolamine) are not thought to be effective after symptoms have begun. Small-dose benzodiazepines, diuretics, and calcium channel blockers have been used, but care must be given for potential adverse side effects. Topiramate has also been used, with the favorable side effect of weight loss.⁴

Veronita Crawford, MS
José E. Rodriguez, MD
Florida State University
Tallahassee, FL

What preoperative evaluation is indicated in a patient with left bundle branch block?

Evidence-Based Answer

Patients with left bundle branch block (LBBB) who do not have signs or symptoms of coronary artery disease (CAD) or congestive heart failure (CHF) and who have normal functional capacity do not require extensive preoperative cardiac evaluation. (SOR C, based on expert opinion.)

A case-controlled study followed 17,361 subjects over a 40-year period to assess the incidence and course of LBBB. Although LBBB did not alter all-cause mortality, it was associated with increased mortality from CHF (relative risk [RR] 2.4; 95% confidence interval [CI], 1.31–4.41) and myocardial infarction (RR 2.9; 95% CI, 1.27–6.60).¹

A cohort study of 7,073 patients (150 of whom had preexisting LBBB) referred for symptom-limited nuclear exercise testing followed patients for 6.7 years, with the primary outcome of all-cause mortality. After adjusting

¹ Hillier SL, Hollohan V. Vestibular rehabilitation for unilateral peripheral vestibular dysfunction. Cochrane Database Syst Rev. 2007; (4):CD005397. [LOE 1a]