Anticoagulant Sulodexide Therapy for Tinnitus

Summary by John A. Coverstone, AuD

The search for a drug to improve tinnitus is a continuous endeavor in tinnitus research, with few drugs showing positive effects and, even then, only on a subset of tinnitus patients. Researchers from St. Joseph University in Beirut, Lebanon, and The University of Texas Medical Branch in Galveston, TX, studied the effects of sulodexide in treating tinnitus. Sulodexide is an anticoagulant currently showing promise for diabetic neuropathy and a variety of other vascular diseases. Prior studies have shown promise with sulodexide in combination with melatonin over use of melatonin alone for tinnitus relief. The authors of this study sought to determine the effects of sulodexide in isolation.

The authors assessed 150 people for participation in a double-blinded placebo controlled study to determine the effects of sulodexide. All participants were at least 18 years of age and had experienced tinnitus for more than a year. Those with medical conditions known to be associated with tinnitus were excluded. Others were lost to follow-up or declined to participate. One hundred and twenty-four people completed the study. Tinnitus severity was gauged by self-reported scores using the Tinnitus Handicap Inventory (THI) and Mini-Tinnitus Questionnaire (Mini-TQ).
The participants were computer-matched into two cohorts, one of which received placebo and the other sulodexide. Cohorts were matched according to age and gender. THI and Mini-TQ scores also were similar between cohorts. Those taking placebo were given a pill that was made of cornstarch and looked identical to sulodexide. One staff member was aware of who was receiving the placebo and who was receiving sulodexide. This allowed the physician and patients all to be blinded to the substance being taken. Subjects took a pill morning and evening for 40 consecutive days.

After the 40-day administration of placebo or sulodexide, a significantly lower THI score was found in the group that had taken sulodexide, compared to those taking placebo (THI score of 30.1 and 40.5, respectively). Scores on the Mini-TQ also demonstrated a greater decrease for those taking sulodexide (average of 9.7 vs. 12.5). Further analysis showed that those taking sulodexide demonstrated decreased scores on the THI and Mini-TQ, regardless of their beginning score.

The mechanisms by which sulodexide may improve tinnitus are not yet understood. However, this study demonstrated that this drug has potential to reduce the severity of tinnitus and holds promise for further study in this area.

