Improvement in Hyperacusis with Tinnitus Retraining Therapy

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Method
• Prospective study of patients with hyperacusis presenting to the Tinnitus clinic in a tertiary referral Otorhinolaryngology unit in Singapore between 1997 and 2010.
• Hyperacusis was confirmed with loudness discomfort level (LDL) measurements.
• Audiometry was performed in all patients.
• Improvement in hyperacusis following TRT was measured by LDL measurements and structured interviews, with aid of questionnaires and visual analogue scores.

Results
• 197 patients were studied.
• Improvement was achieved in 39%.
• 75% used environmental sound enrichment strategies (including Marsona® sound generator) alone.
• 18% used Viennatone® broadband noise generator in addition.
• 18% had hearing aids (HA) fitted even though 73% had hearing loss.
• Patients who opted for HA complained of worse effects of hyperacusis on life (7.0 vs 5.9).
• Age and presence of hearing loss were similar in patients who did and did not improve.
• There was a higher percentage of female patients who did not improve.
• Duration of treatment was significantly longer in patients that improved (p<0.01).
• Improvement with Viennatone® was significantly higher than with environmental sounds alone (49% vs 35%, p<0.05), especially when used in presence of hearing loss (67%).

Conclusion
• Modest proportion of patients with hyperacusis improved with TRT.
• Use of broadband noise generators and longer duration of therapy appear to give better success rates.
• Overall success of TRT in patients with hyperacusis may also be related to underlying medical problems such as thyroid conditions and multiple sclerosis.