

INTERMITTENT VAGAL BLOCK WITH AN IMPLANTABLE MEDICAL DEVICE IMPROVES BLOOD PRESSURE IN OBESE SUBJECTS

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Background

An implantable device that intermittently blocks intra-abdominal vagal trunks has been reported to cause significant excess weight loss (EWL) in obese subjects.

Aim

The aim of this analysis was to assess effects of VBLOC therapy on blood pressure in obese subjects with elevated systolic (SBP) and/or elevated diastolic blood pressure (DBP) at baseline.

Method

Implants occurred at 4 sites. BP effects were assessed at 1, 3 and 6 mo. Elevated blood pressures were defined as a baseline SBP ≥ 130 mmHg and/or a DBP ≥ 80 mmHg, which are the JNC-7 criteria for hypertension or pre-hypertension

Results

To date, 19 subjects with either elevated SBP at baseline and/or elevated DBP at baseline have had 6 mo follow-up visits after device implant. Mean body mass index at baseline was 41.9 ± 1.1 . Mean EWL reductions were 9.4 ± 1.5 , 15.2 ± 2.5 and $19.0 \pm 3.7\%$ at 1, 3 and 6 mo respectively (all $p < 0.001$). Subjects with elevated SBP ($n=11$) had reductions in SBP of 20 ± 5 , 20 ± 6 and 20 ± 6 mmHg at 1, 3 and 6 mo respectively (all $p < 0.05$) compared to a baseline of 145 ± 4 mmHg. Subject with elevated DBP ($n=17$) had reductions in DBP of 10 ± 2 ($p < 0.001$), 6 ± 3 ($p = 0.05$) and 6 ± 2 ($p < 0.05$) at 1, 3 and 6 respectively from a baseline of 88 ± 2 mmHg.

Conclusion

VBLOC therapy resulted in clinically significant reductions in SBP and DBP in obese subjects. Improvements occurred early in the course of weight loss and were sustained.