中文題目：腎動脈交感神經燒灼術有效降低高血壓患者之經皮測定交感神經活性

英文題目：Renal Sympathetic Denervation Reduces the High Skin Sympathetic Nerve Activity in Hypertension

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Background: Studies in dogs showed renal denervation (RDN) reduces the stellate ganglion sympathetic nerve activity. Recent clinical trials showed that renal denervation (RDN) can reduce blood pressure effectively. neuECG is a novel method to record skin sympathetic nerve activity (SKNA) and ECG simultaneously. SKNA is shown to be associated with high sympathetic status such as syncope, arrhythmia and acute coronary syndrome.

Object: We hypothesize that (1) the average SKNA (aSKNA) is higher in subjects with hypertension (HTN) than controls and (2) RDN reduces aSKNA in patients with HTN.

Method: Patients with HTN who received RDN were enrolled as the HTN group and normal subjects from health checkups were enrolled as the control group. SKNA and ambulatory blood pressure monitoring (ABPM) were recorded before and 3 months after RDN.

Results: Ten HTN patients and 10 age and gender matched controls are analyzed. The aSKNA is significantly higher in HTN (1.07±0.33 μV) than in the control (0.78±0.11 μV) group (p=0.022). The ABPM recording was successful in 92±10% of the time per patient. RDN significantly reduced the aSKNA in the HTN group to 0.77±0.12 μV (p= 0.028). Mean 24h systolic and diastolic BP (in mmHg) recorded by ABPM 3 months after RDN are significantly decreased when compared to those before RDN (123±12 vs 130±13, p=0.026; 71±6 vs 75±2, p=0.028; respectively).

Conclusion: HTN is associated with increased aSKNA at baseline. RDN reduces the aSKNA. These effects may partially explain the effects of RDN in AF control.