## Buffalo Horn BoJin Scraping Massage Improves Short-Term Sleep Quality and Density: Report of Two Cases

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*Objective*: In clinical experience, Buffalo horn BoJin scraping massage would subjectively improve sleep quality. The aim of this study was to investigate whether the BoJin scraping massage technique could objectively improve sleep through standard polysomnography assessment.

*Materials and Methods*: Two volunteer subjects (who did not have head, neck, or back lesions that made it unacceptable to Buffalo horn BoJin scraping massage) participated in this study. On the first night, they underwent a standard nocturnal polysomnography. On the next night, they first underwent deep-relaxation BoJin scraping massage technique for 1 hour, and then repeated the overnight polysomnography sleep study. The results of these two sleep studies were compared.

**Results:** After the BoJin scraping massage, both subjects subjectively reported that the sleep quality of that night was immediately and significantly improved. Compared with the baseline results of the objective sleep study, after massage, it prolonged and increased N2 and REM sleep (mean, +3.1 min and +1.2 %, +13.8 min and +3.9 %, respectively), and it shortened and decreased N1 sleep and Wake (mean, -4.8 min and -1.3 %, -13.6 min and -3.7 %, respectively). In addition, limb movements and periodic limb movement index during sleep were significant decreased after the massage (mean, -68 times, -5.1 times/hour, respectively).

*Conclusion*: Buffalo horn BoJin scraping massage would subjectively and objectively improve short-term sleep quality and density.

中文題目: 牛角撥筋按摩改善短期睡眠質量和密度:兩案例報告

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