中文題目：台灣一大型追蹤研究發現咀嚼檳榔會降低骨密度

英文題目：Betel nut chewing decreased bone marrow density T-score in a large Taiwanese population follow-up study

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Background: Chewing betel nut is common in Taiwan. Although previous studies have shown that chewing betel nut is associated with adverse health effects, findings about the impact on bone density have been inconsistent. Therefore, the aim of this study was to investigate the correlation between betel nut chewing and bone marrow density (BMD) T-score in a longitudinal study of 118,856 participants from the Taiwan Biobank.

Materials and Methods: Of these participants, 27,002 were followed up for a median of 4 years, and the follow-up data were analyzed to elucidate the link between betel nut chewing and changes in BMD T-score. BMD of the calcaneus was measured in the non-dominant foot using ultrasound. Change in BMD T-score (ΔT-score) was calculated as: follow-up T-score − baseline T-score.

Results: Multivariable analysis showed that a history of chewing betel nut (coefficient β = -0.232; $p < 0.001$) was significantly associated with low baseline T-score in all participants (n = 118,856). In addition, a long duration of betel nut chewing (per 1 year; coefficient β = -0.003; $p = 0.022$) was significantly associated with a low baseline T-score in the participants with a history of chewing betel nut (n = 7,210). Further, a long duration of betel nut chewing (per 1 year; coefficient β = -0.004; $p = 0.039$) was significantly associated with a low $\triangle$T-score in the participants with a history of chewing betel nut (n = 1,778) after 4 years of follow-up.

Conclusions: In conclusion, our results showed that betel nut chewing was associated with a decrease in BMD T-score, and thus that it is important to stop chewing betel nut to help prevent osteoporosis in the Taiwanese population.

Key words: bone marrow density; betel nut chewing; follow-up; Taiwan biobank