

4th Asia Pacific Congress & Expo on **Dental and Oral Health** July 27-29, 2015 Brisbane, Australia

The effect of acidic soft drink challenge on the dentinal tubules occluded by commercially available tooth pastes

Bakri M M, Zaberi Z H S, Misroni A A and Zakir H M University of Malaya, Malaysia

Dentine hypersensitivity is a common problem attributed by patent dentinal tubules. Ingredients incorporated in the commercially available toothpastes aim to occlude patent dentinal tubules. However, frequent exposure to acidic drinks consumed may reverse or decrease the dentinal tubules occlusion. In this *in vitro* study, the efficacy of dentinal tubules occluded by new commercially available toothpastes to withstand different duration of acidic soft drink challenge was investigated. One hundred and twenty dentin discs from human teeth were divided into three groups. The discs of group-1 were brushed with Novamin* containing tooth paste while group-2 brushed with the Arginine* containing toothpaste and group-3 brushed with control toothpaste. Each group were then subdivided into four subgroups and exposed to acidic soft drink (Coca-Cola*) challenge. Subgroup-1 was exposed to the soft drink for 30 seconds, subgroup-2 for 1 minute, subgroup-3 for 2 minutes and subgroup-4 for 5 minutes. The efficacy of dentinal tubules occlusion was determined using a visual scoring index and the percentage of occluded dentinal tubules after treatment was determined. Dentinal tubules occlusion score and percentage by Novamin* containing toothpaste was significantly better when compared to Arginine* or the control toothpaste. Acidic soft drink challenge reversed the pattern of dentinal tubules occlusion. However the duration to withstand the acidic soft drink challenge to toothpaste. Dentinal tubules occluded by Novamin* containing toothpaste withstand the acidic soft drink challenge reversed the pattern of dentinal tubules occlusion. However the duration to withstand the acidic soft drink challenge for comparatively longer period. The findings demonstrated that dentinal tubules occluded by bio glass-containing toothpaste (Novamin*) are comparatively more resistant to acidic soft drink challenge.

Biography

Bakri M M is attached to the 'Department of Oral Biology & Biomedical Sciences', Faculty of Dentistry, University of Malaya. Her research interests include oral histology of dental tissues, oral Biology, aging of the dental tissues and role of Candida infection in precancerous lesion.

marinab@um.edu.my

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