

Identification of Minangese Palatal Rugae Pattern

Nila Kasuma

Faculty of Dentistry, Andalas University, Indonesia

Indonesia is one of the countries that frequently suffers from mother nature disaster. Therefore, forensic odontology is consider as an essential entity in the forensic identification process. Palatal rugae is a very individualised characteristic anatomy in human and in certain population it may be descended through matrilineal lineage. Therefore, palatal rugae pattern has the potential to be used in identifying ethnic, one's race and lineage. Minangese as an ethnic group has unique kinship which is matrilineal-based. The aim of this study is to identify the pattern of Minangese palatal rugae based of shape and length of palatal rugae. This is a descriptive study. Total of 300 of Minangese people were recruited. Palatal rugae of each subject is marked using 2B pencil on the jaw mould accordingly. The method of identification of rugae pattern was adapted from Thomas and Kotze (1983) and Kapali et al (1997) which include the shape and length of rugae. The results showed that pattern of Minangese palatal rugae based of shape is wavy shape and pattern of Minangese palatal rugae based of length is primary rugae.

Keywords: Forensic odontology, Palatal rugae pattern, Rugoscopy, Minangese

58

Neuroscience

Neuroprotective Effect of Chrysoeriol against MPP⁺-Induced Apoptotic Cell Death in SH-SY5Y Cells

Tanapol Limbunnrueng, Patoomratana Tuchinda, Sukumal Chongthammakun

Department of Anatomy and Structural Biology, Faculty of Science, Mahidol University, Bangkok, Thailand

Neuronal degeneration caused by mitochondrial apoptotic pathways implicates in many neurodegenerative diseases including Parkinson's disease (PD). Chrysoeriol, a flavonoid compound found in tropical plants, exhibits a variety of pharmaceutical activities including antioxidant and antiinflammatory properties. The protective effect of chrysoeriol extracted from *Phyllanthus niruri* in cellular models of PD has not been investigated. In the current study, we examined the protective effects along with the underlying mechanisms of chrysoeriol in an experimental PD model in vitro, in which SH-SY5Y cells were injured by 1-methyl-4-phenylpyridinium (MPP⁺). Our study showed that MPP⁺-induced cell death in SH-SY5Y cells was significantly reduced by chrysoeriol pretreatment in a dose-dependent manner, indicating the potent neuroprotective effects of chrysoeriol. The expression of pro-apoptotic Bax protein and anti-apoptotic Bcl-2 protein was examined by Western blotting of the protein levels and real-time quantitative PCR (RT-qPCR) measurement of mRNA levels. On the molecular level, we found that pretreatment with chrysoeriol significantly decreased the ratio of Bax to Bcl-2 at both the mRNA and protein levels. The results suggested that chrysoeriol exhibited significant neuroprotective effect against experimental PD models via regulation the balance of pro- and anti-apoptotic genes. The present study supports the notion that chrysoeriol may be a promising neuroprotective molecule for prevention of neuronal death in brain caused by neurodegenerative disorders such as PD.