

Pengaruh induksi lipopolysakarida (LPS) terhadap osteopontin tulang alveolaris tikus pada masa erupsi gigi

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Abstrak

Tooth eruption is a complex process that involves osteoclasts to form the eruption pathway. Lipopolysaccharide (LPS) is a bacterial component that plays multifunctional roles in inflammatory reactions, and one of these roles is powerful stimulation of bone resorption. Osteopontin (OPN) is a phosphorylated glycoprotein the expression of which is associated with migration, attachment and signaling of osteoclast. The objective of this study was to investigate the effect of LPS on rat alveolaris bone osteopontin during the period of tooth eruption. Fifty five Wistar male albino rats, five days of age were divided into three groups. The first group was not subjected to any treatment. The second group was inducted with LPS at five days of age. The third group was inducted with LPS at nine days of age. Expression of OPN was analyzed by immunohistochemical (IHC) approach. The results showed significant differences in OPN expression ($p < 0.05$) within the treated subjects. It was concluded that LPS induction during tooth eruption increases the level of alveolar bone osteopontin.