Comparison Of Articaine And Lidocaine For Inferior Alveolar Nerve Blocks


This prospective, randomised, double-blinded study aimed to compare the degree of pulpal anaesthesia following inferior alveolar nerve blocks (IAN) using 4% articaine with 1:100,000 epinephrine or 2% lidocaine with 1:100,000 epinephrine. In addition, solution deposition pain and post-injection pain of the two solutions were evaluated using a Heat-Parker visual analogue scale. Using a cross-over design, 57 healthy subjects randomly received an IAN block injection with either an articaine or lidocaine solution, at two separate appointments at least one week apart. An electrical pulp tester was used to test for anaesthesia, in 4-min cycles for 60 min, from the second molar to the central incisor. Anaesthesia was considered successful when two consecutive maximum output readings were obtained within 15 min and the reading was continuously sustained for 60 min. Anaesthetic failure was found in 7 to 72% of subjects administered with the articaine solution, and 9 to 75% with the lidocaine solution; however, the differences were not statistically significant. There was no significant difference between the two anaesthetics for the solution deposition pain ratings and post-injection pain on the day of the injection and first post-injection day. The authors concluded that the pulp anaesthetic effect of 4% articaine with 1:100,000 epinephrine was similar to 2% lidocaine with 1:100,000 epinephrine for inferior alveolar nerve blocks.