

## Perbandingan mulai kerja dan masa kerja dua anestetik lokal lidokain pada kasus pencabutan molar rahang bawah = A comparison of the onset and duration of action of two local anesthetics in the extraction of the molar teeth of the mandible

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### Abstrak

Ruang Lingkup dan Cara Penelitian: Lidokain adalah anestetik lokal yang banyak digunakan dalam bidang kedokteran gigi, karena mempunyai mula kerja cepat dan masa kerja lama dan jarang menimbulkan alergi. Anestetik lokal lidokain yang biasa digunakan adalah lidokain 2% dengan epinefrin 1 : 80.000. LC adalah lidokain Inpres yang dikeluhkan oleh dokter gigi Puskesmas mempunyai mula kerja lama dan masa kerja singkat. Penelitian ini bertujuan untuk membandingkan mula kerja dan masa kerja LC dan PC (obat anestetik lokal standar) pada kasus pencabutan gigi molar satu atau molar dua rahang bawah.

Penelitian dilakukan terhadap 60 orang pasien, yaitu 30 orang mendapat LC dan 30 orang mendapat PC dengan Cara anestesi infiltrasi dan anestesi blok rahang hawah. Observasi mula kerja dilakukan dengan penusukan sonde lurus pada daerah separuh bibir, 2/3 anterior lidah ipsilateral dan mukosa pipi dan luksasi ringan gigi yang akan dicabut dengan interval 1 menit. Observasi masa kerja dilakukan dengan penusukan sonde pada daerah observasi dan soket bekas pencabutan gigi setelah 1 jam dan kemudian setiap 15 menit.

Hasil dan Kesimpulan: Mula kerja rata-rata LC 560,7 detik dan PC 254,8 detik. Masa kerja rata-rata LC 124,5 menit dan PC 170 menit. Mula kerja dan masa kerja LC dan PC berbeda bermakna dengan  $p < 0,01$ . Perbedaan mula kerja dan masa kerja LC dan PC mungkin disebabkan perbedaan formulasi, yaitu perbedaan bahan baku dan zat penambah lain seperti vasokonstriktor, zat pengawet dan lain-lain.

*Scope and Method of Study: Lidocain is currently a local anesthetic agent most widely used in dentistry, because of its rapid onset, long duration of action and*

*safety. It is commonly used as a 2% solution containing 1: 80.000 adrenalin. Lidocain (LC) is a trade name for lidocain that is routinely used in Puskesmas (Inpres drug). Complaints about the insufficiency of LC are frequently reported by dentists who work at these local health centers. On the other hand, a large body of information revealed that dentists prefer to use another trade name of lidocain, namely "Pehacain" (PC) to LC.*

The purpose of the present study is to compare the efficacy of LC vs PC in clinical use, i.e. in the extraction of the first or second molar of the mandible. A total of 60 patients is divided into two groups, consisting of 30 patients each. The first group was treated with LC and the second group with PC, each was locally injected as infiltration and block anesthesia. The onset of action of the drugs was determined by prickling of the lip, tongue and buccal mucosa with a sonde and by a slight luxation of the affected tooth, at an interval of 1 minute. The duration of action of the drugs was determined 1 hour after the onset of anesthesia, by prickling the anesthetized socket every 15 minutes.

Findings and Conclusions: The onset of action of LC was  $566.7 \pm 82.8$  (mean  $\pm$  SD) seconds, and that of PC was  $259.8 \pm 32.0$  seconds. The duration of action of LC was  $124.5 \pm 13.5$  minutes, while that of PC was  $170 \pm 9.1$  minutes. The onset and duration of action of these two drugs differed significantly ( $p < 0.01$ ). The cause of the differences might lie in the differences in the constituents of the drugs, such as the reducing agents, type of preservation, the amount of vasoconstrictor added, etc.