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### Abstract

[MORETTI NETO, Rafael Tobias](#) et al. *In vivo* qualitative analysis of the biocompatibility of different cyanoacrylate-based adhesives. *Braz. oral res.* [online]. 2008, vol.22, n.1, pp. 43-47. ISSN . doi: 10.1590/S1806-83242008000100008.

Cyanoacrylates have been widely used in the medical and dental fields for several years. In Dentistry, cyanoacrylates have been used for suturing, pulp capping, as retrofilling material in endodontic surgeries, and as cervical plug for pulpless teeth bleaching. The biocompatibility of these adhesives has been the topic of many researches and subcutaneous implantation is an effective methodology for these studies. The present study evaluated the biocompatibility of three different cyanoacrylate-based adhesives. Thirty-six Wistar rats were used, divided into four groups of 9 animals each: A (control) - distilled water, B - cyanoacrylate ester (Super Bond), C - n-butyl-cyanoacrylate (Histoacryl) and D - alpha-cyanoacrylate (Three Bond). The materials were dispensed in sponges of polyvinyl chloride, the animals were incised and the sponges were inserted in the subcutaneous tissue and sutured. Each group was sub-divided according to the time of sacrifice of the animals: 7, 21 and 45 days. Subjective analysis of the histologic material showed that all groups presented some degree of irritability, but the inflammatory reaction decreased with the experimental time in all groups. Group D showed an inflammatory reaction which was closer to that of the control group and was considered to have good biocompatibility. Groups B and C were similar and presented more aggressive inflammatory reactions when compared to the control group. Based on the results, it was concluded that alpha-cyanoacrylate (Three Bond) was the most biocompatible adhesive because it caused the lowest levels of inflammation.

Keywords : Adhesives; Inflammation; Subcutaneous tissue; Rats, Wistar.

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