

Fluctuation of salivary α -amylase affected by the time change of injection

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ABSTRACT

In previous study, we have proposed a pain evaluation test by measuring a stress factor which is fluctuation of salivary α -amylase (sAA) on mice. During the experiment, mice were injected on the same period of time by different diameter size of needles which have the same degree of bevel and length. For injection groups, the mice were injected for 3 seconds with depth of 3mm in vertical direction on femoral region of mice. Next, Mann Whitney-U tests were adopted and the measurement from injection groups and control group were compared. According to the result, the marginal outer diameter of the needle within painless region were confirmed at $95 \mu\text{m} \leq X \text{ (outer diameter)} < 100 \mu\text{m}$. In this study, mice were injected on the different period of time by the same type of needle, 95 μm of outer diameter, which was confirmed as the marginal outer diameter of the needle within painless region. Then, whole saliva will be collected and measured by absorptiometry method before the fluctuations of sAA were observed.

KEYWORDS:

Biochemistry; biomedical engineering; biomedical equipment; biomedical measurement; bone

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