

IMPROVING THE SAFETY OF LOCAL ANESTHESIA IN DENTISTRY BY INCREASING THE EFFICIENCY OF THE ASPIRATION TEST

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Abstract

Objective. Assessment of a aspiration test effectiveness in local anesthesia with carpool syringes of different plunger design and different diameters of needles.

Material and methods. The study involved 2200 patients (aged 20-75 years) who had dental treatment with local anesthesia. Disposable and carpool syringes of 6 types differing in the shape of a plunger were used for infiltration and conduction anesthesia.

Infiltration anesthesia in the area of teeth 1.3, 2.3, 1.8, 2.8 was performed with 3 types of needles: G22 (0,7 mm), G27 (0,4 mm), G30 (0,3 mm), and conductive anesthesia of the mandible – 2 types of needles: G22 (0,7 mm), G27 (0,4 mm).

Results. Disposable syringe and carpool syringe with plunger "anchor" and "corkscrew" type allowed to carry out the aspiration test in 100% of cases, "sickle" type in - 80%. The "hook» and "arrow" design of the syringe plunger allowed performing the aspiration test only in 6% of anesthesia cases. When using a carpool syringe with a "flat" plunger conducting the aspiration test was impossible The study revealed that using a smaller needle diameter more often led to a positive aspiration test.

Conclusion. The most effective and convenient to performing aspiration tests are carpool syringes with plungers "anchor" and "corkscrew" shape.

The aspiration test performing should be recommended when using G30 needles for infiltration anesthesia. In conductive anesthesia dentists should use G27 needles, since the frequency of intravascular injection of anesthetic is less in this case.