

number of measures to increase public confidence and awareness. To begin with, it is necessary to establish a “government-doctors” channel and work with medical workers, because people trust doctors more than government officials. Opinion leaders should have a common position on vaccination. It is necessary to inform the population in a language understood by the majority, to use a wide range of media, to increase media literacy. Solve the main problems associated with vaccination and prevent underestimation of the disease.

## STUDY OF MEDICAL DEVICES FOR INTRADERMAL INJECTIONS

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**Introduction.** Mesotherapy is a method of introducing special preparations in the form of microinjections into the middle layer of the skin. A competent choice of quality instruments is the key to the effectiveness of the procedure without side effects. Injection mesotherapy can be hardware with the use of mesoroller, mesoinjector or made manually with a syringe and special needles. It is mesotherapy arsenal of needles is quite limited because they have a range of features.

**Aim** of our study was to analyze the range of needles for intradermal injections presented on the Ukrainian market, their labeling and packaging.

**Materials and methods.** In carrying out these studies, we have used such empirical and theoretical methods: observation, analysis of literature, classification, generalization, description.

**Results and discussion.** Analyzing the national market of cosmetic instruments, namely needles for injections, it was found that they are represented exclusively by foreign manufacturers (Spain, Germany, Italy, Korea, China), the most popular brands such as TM BogMark, KDM, Meso-Relle, etc.

Disposable syringes are used during mesotherapy. Most often they are three-part syringes with a rubber piston that allows you to carry out a precise dosage of the drug. Must have a special safety against the penetration of the needle beyond its proper length. For manual technique, syringe volume is taken from 1 to 10 ml, for mesoinjectors - 10 ml.

The needles are thinner to avoid pain; the short length (2 - 40 mm) compared to standard medical needles (20 - 120 mm) ensures the accuracy of small doses of the drug. The following needle sizes are now known:

- ultra-short (0.5 - 3 mm) - for high-sensitivity areas (around the eyelids and lips);
- short (2 - 5 mm) - for procedures in the facial area;
- medium length (7 - 18 mm)- for body mesotherapy,
- long (4 - 15 mm) - for head;
- more than 20 mm - for linear technique.

These needles use a special laser-ground cut, the so-called Labelle needle, which reduces the risk of vascular damage and ensures precise introduction of the drug to the desired level.

The caliber of the needle is given by the Gauge scale and depends on the area of the procedure and the density of the injected drug (for example, for viscous hyaluronic acid the needle should have a larger diameter than for vitamin-mineral complex):

- 32G - for removing small wrinkles and correcting lips;
- 30G - for correction of pronounced wrinkles;
- 27G - for scalp and body skin;
- Nano-needles of caliber 30G, 33G, 34G with very thin walls - for the introduction of viscous solutions;
- SIT-needles, 0.26 mm in diameter, 2 mm long with a special limiter that prevents injecting the solution too deeply, thus reducing the risk of injury. The SIT-needle is inside a plastic cap ending in a suction cup - the vacuum effect reduces pain in particularly sensitive areas (lips, nose, ears).

Cosmetologists have to change needles frequently during the procedure, so it is important to have meso-needles of different diameters. For example, the dilution of the substance and the injection of the drug require different needle diameters.

Needles are marked with a caliber designation, indicating the diameter and length in parentheses. For example, marking 33G (0.30×6) corresponds to a needle with an outside diameter of 0.30 mm and a length of 6 mm.

The color coding complies with the national medical device standard international ISO 6009:

- 30G-yellow;
- 29G- red;
- 28G- azure;
- 27G - light gray;

The packaging of disposable needles must ensure that they are airtight and sterile. Each needle is packed in a primary consumer package, which must be partially transparent to determine the color of its base. Secondary packaging is a cardboard box, which is similarly labeled and contains 100 needles.

Labeling of needles must meet the requirements of uniform standards. The package must bear the needle designation, the inscription "Sterile", the series number with the month and expiration date.

**Conclusions.** Thus, knowledge about the labeling of injection needles will help the cosmetologist to choose the right instrument for the mesotherapy procedure depending on its purpose. And also check the compliance of the needles with the current documentation and protect yourself from fakes and counterfeits.

## STUDY OF MEDICINES PROMOTION IN EGYPT

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**Introduction.** Egyptian pharmaceutical market today is very rich and it has a high level of competition. National and foreign medicines producers actively apply various ways of promotion on the market to attract consumers to their products. That is why the process of marketing and promotion of pharmaceutical companies must be monitored and strictly regulated.