O17. STERILE INKS AND METHODS OF STERILIZATION

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Aim: Introduction of tattoo inks in the skin has been associated with a potential entry of a great number of microorganisms (bacteria, viruses, moulds). Contaminated pigments, diluents and instruments can represent primary infection risk factors. At the moment, tattooing is subject to little control from a viewpoint both to ink production/sterilization and tattooing practices. In the last decade two European recommendations were approved. According to the more recent ResAP 2008-1 tattoo inks should be sterilized before marketing; nevertheless it does not provide details on sterilization and preservation process. Advantages and disadvantages of the commonest sterilization techniques will be described.

Methods: The radiation is generally suitable for sterilization of tattoo inks. This sterilization technology is widely used in many countries and enables products to be sterilized without altering organoleptic, physical and chemical characteristics. Sterilization should destroy the DNA of all the microorganisms, thus inactivating them.

Results: From the scientific literature the radiation technology is considered safe, reliable, and highly effective. Nevertheless microbiological studies match the supposition that the current ink sterilization systems have a low capability to inactivate microbial burden in tattoo inks. It is not a case that radiation resistance varies widely among different microorganisms and that is related to differences in their chemical and physical structure, as well as in their ability to recover from radiation injury.

Conclusions: There is a strong need to develop a European regulation addressing both ink production and sterilization, tattooing practices and quality control and their distribution in order to ensure the consumers' health.

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