

Tattooing and regional anesthesia

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Background: Tattooing has experienced a boom since the 1990s, with a current prevalence of ~25% among americans aged 24-50 years. Pigments penetrating the dermis remain definitively whereas pigments limited to the epidermis are shedded during the first few weeks. Originally, pigments were inorganic (titanium dioxide, cadmium sulfate, chromium oxide, iron oxide and carbon), but the use of organic pigments of uncertain composition is increasingly common. Anesthesiologists see a growing number of tattooed patients in their daily practice

Case report: A 35-year old patient (P1) with a tattoo in the posterior thoracic area (approximately reaching T12) was submitted to abdominal liposuction from the xiphoid process down under lumbar peridural anesthesia (L1-L2) with local anesthetic and opioid using a catheter introduced up to 5 cm above the puncture.

Discussion: Widely used pigments of unknown composition, which have not been regulated or officially approved for use in humans, may have potentially carcinogenic or cytotoxic effects on the nervous system if deposited in sites such as the interspinous ligaments and the epidural and intrathecal spaces. The resulting pathologies may take years to develop and are rarely diagnosed early.

Pigments have been found in axillary lymph nodes positive for malignant melanoma 30 years after tattooing. Likewise, in a 34-year old pregnant woman, pain and hypersensitivity were likely precipitated by pigments deposited in nerve tissue during epidural anesthesia, although the cause could not be established with absolute certainty. To our knowledge, no other studies or case reports have described serious complications from spinal or epidural puncture through tattooed skin, and some authors have even questioned the existence of a risk.



References: Frederic J. Mercier and Marie-Pierre Bonnet. Tattooing and various piercing: anaesthetic considerations. Current opinion in Anaesthesiology, 2009; 22:436-441.