The 2011 Summary
of Published Medical Journal Articles
Involving Body Piercing, Modifications, & Tattooing

Submitted to the APP & others on 3 8 12

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List of 2011 Published Medical Articles on Body Art


Lehner, K., et al. (2011). Black tattoo inks are a source of problematic substances such as dibutyl phthalate. Contact Dermatitis. 65(4). 231-238.


Matheron, E., et al. (2011). Face piercing (body art:) Choosing pleasure vs. possible pain and posture instability. Front Physiol. 2. 64.


Urbanus, A., et al. (2011). People with multiple tattoos and/or piercings are not at increased risk for HBV or HCV in The Netherlands. PLoS One. 6(9). E24736.


- “We suggest that tattoo materials and techniques could be utilized in therapeutic delivery for diseases such as epidermolysis bullosa, potentially preventing immune rejection of gene therapy agents.”

- Over 50,000 new tattoos are placed each year in the United States
- Summary of tattoo removal options – past and present

- Study of art from 38,000-11,000 years ago
- “Decorative rituals of male genital tattooing, piercing, and scarification may have been practiced during Paleolithic times.”

- 50 patients with ear lobe or cartilage piercings
- Only cartilage piercing sites developed the keloids

- “Specific types of tattoos, but not all tattoos, may be risk factors for homicide.”

- Ned Kelly was a 19’th century Aussie outlaw
- A Ned Kelly tattoo identified at autopsy in another country or in a disaster victim identification situation may suggest that the decedent was Australian or had a connection with that country.

- 2 cases of cutaneous pseudolymphoma at site of mercury-based tattoo
- Only 40% of Italian adolescents surveyed were aware of the issues related to tattoo removal

- Brief summary of removal/non-removal issues with tongue piercings and surgery

- Photo pictorial of transfer technique using IV catheters for various body piercings to maintain piercing patency in medical situations

- 27 y/o female with angioedema-like reaction after first exposure to a hair dye who was unaware of previously being sensitized to PPD from a black henna tattoo

- 11 y/o boy with allergic contact dermatitis 3-days post temporary henna tattoo with PPD

- Overview of reasons for body art, complications, and removal options

- 7 year old girl requiring operative removal of ear jewelry
- Pierced in a « beauty parlor » six weeks prior
- « Complications after body piercing are observed in adults, as well as in children, in whom the decision of piercing performance should be carefully considered and rather postponed until self care is achievable. »
- Study of adolescents and undergraduates in Naples, Italy
- Of 9,322 adolescents, 31% were pierced & 11% were tattooed
- Of 3,610 undergraduates, 33% were pierced & 24% were tattooed
- 79% of adolescents & 87% of undergraduates knew about infectious risks
- Only 3% of adolescents & 15% of undergraduates knew about viral disease transmission
- 73% of adolescents & 33% of the undergraduates had body art done at unauthorized facilities

- Splint/compression therapy for keloids was painless in 80% of patients, but did require to be worn at least 10, but better with 20 hours a day
- “Although it requires considerable time and effort, the technique seems to be a promising therapy.”

- Review of published literature on oral piercing complications
- 81% of complications occurred with tongue piercings, 20% with lip piercings, & 1% with other oral piercings

- 6 of 58 (10%) of unopened stock bottles were contaminated with bacteria
- 1 of 6 (17%) of previously used stock bottles was contaminated with bacteria
- “The European Council resolutions regarding safety of tattoo inks are not effective. Stock bottles of tattoo ink may contain bacteria pathogenic to humans and environmental bacteria, and packaging, labeling, and preservation of inks are of inadequate quality. Claim of sterility can be erroneous.”

- Tattoo ink particle sizes were classified and this study may contribute to the understanding of tattoo ink kinetics

- Ablative fractional resurfacing for tattoo removal on 2 patients
- «Body piercing has to be considered as a surgical procedure to all intents and purposes, and as such, has to be performed only by qualified personnel able to assure high standards of professionalism in facilities subject to sanitary inspections.»
- Study of 108 patients, 14-39 years of age, who had oral piercings done 12 months prior
- None of 108 patients had widespread complications
- 90% reported bleeding within 12 hours of piercing, 80% reported edema around site for 3 days post-surgery, & 70% reported persistent mucosal atrophy

- «The low bacterial counts from piercing channels suggest that having a tongue pierced would not contribute to an increased risk for oral infection»
- Suggests that jewelry made of PTFE or PPE may have less chance of bacterial infection compared with steel or titanium

- 3 cases of mycobacterium skin infection from same tattoo parlor

- «Q-switched laser treatment is a safe and very effective means of removing cosmetic mucosal tattoos on the inner lip and should be considered the criterion standard treatment option.»

- Personal reasons 42%, professional/social reasons 37%, & miscellaneous reasons 18%
- «the possibility of surgical tattoo removal should be accessible to patients if the tattoo is small and discussion reveals strong personal motivation.»

- 40 y/o female with above reaction shortly after tattoo with red ink
- 12 y/o female with contact dermatitis from temporary « henna » tattoo
- « better legislation on temporary tattooing practices and control preparations as well as regular annual information aimed at the general public are essential »

- « Temporary tattoos are a novel and effective method of teaching medical students about the psychological burden of psoriasis »

- 151 persons between 18 & 60 years old seeking tattoo removal
- Reasons for removal included aesthetic, social, employment, family or partner pressure, change of lifestyle or partner and incompatibility with present attitudes and values
- « these profiles could be used to target information campaigns about tattooing and tattoo removal techniques to avoid unwanted tattoos, and afterwards, possible disappointment after removal, as well as to target education programs on possible health risks. »

- 15 y/o girl with upper piercing « at a local boutique » after skin prep with an alcohol pad and a sterile straight needle
- Extensive recovery (medical/surgical) post-necrotizing chondritis of upper ear

Lehner, K., et al. (2011). Black tattoo inks are a source of problematic substances such as dibutyl phthalate. Contact Dermatitis. 65(4), 231-238.
- Substances found in the inks might be partially responsible for adverse skin reactions to tattoos

- 6 patients with breast abscess post-piercing
- Sonography shows a complex or hypoechoic mass in 5 of 6 patients
- Surgical evacuation is commonly performed, however, sonographically guided aspiration may be an appropriate management strategy
Matheron, E., et al. (2011). Face piercing (body art:) Choosing pleasure vs. possible pain and posture instability. Front Physiol. 2. 64.
- 4 young adults with possible side effects from face piercing complications
- Eye misalignment, decreased postural control efficiency, and non-specific chronic back pain
- Removing jewelry fixed the above symptoms
- “We suggest that pierced facial jewelry can disturb somaesthetic signals driven by the trigeminal nerve, and thus interfere with central integration processes, notably in the cerebellum and the vestibular nucleus involved in postural control and eye alignment.”

- 28 y/o male with 3 months of skin issues at tattoo – diagnosed as milia

- 22 y/o male with molluscum contagiosum strictly located on area of tattoo

- First reported case of disseminated hyperalgesia post-tattoo
- Possibly due to proximity to the palmar cutaneous branch of the median nerve
- “Future cases may be appearing considering popularization of wrist tattoos by celebrities”

- 29 y/o woman with endocarditis requiring surgical repair post-ear piercing
- Pierced in « beauty parlor »

- Literature search for articles related to genital piercings

- Overview of laser removal of tattoo options

- Survey of 782 substance abusing females
- “older age, history of injection drug use, lifetime crack cocaine use, and having a tattoo were significantly associated with HCV »
- Summary of skin reactions to tattoo ink

- Survey of 1598 Italian college freshmen
- “78% believe it is risky to undergo piercing/tattoo practices”
- “AIDS was indicated as a possible infection by 60%, hepatitis C by 38%, tetanus by 34% & hepatitis B by 33%”
- Average age for first piercing was 15 & for first tattoo was 17

- Case of dermatofibrosarcoma protruberans in the site of a prior and current tattoo

- 16 year old girl with V. botryosa infection several months after ear piercing
- First report of V. botryosa infection associated with a cosmetic procedure, which suggests that skin piercing could precipitate V. botryosa or other opportunistic fungal infections

- 16 y/o female (history diabetes) with extensive bleeding from tongue piercing 4-days prior
- “theorized that the metal piercing eroded the artery below the tongue over the course of 4 days that led to the delayed bleeding” – “diabetes predisposed her to bleeding due to impaired wound healing following piercing”

- Suggest more dilute concentration of patch test in children with history of allergic reactions to PPD

- Time postmortem greatly affected image quality of traditional photography, but not infrared recording of tattoos
- Infrared reflectography was beneficial in the investigation into tattoos postmortem
- Survey of 432 people with tattoos and/or piercings who were readers of a specialized magazine on body modifications
- “Participants with sexual abuse often stated that they wanted to overcome certain experiences, and high users (>10 mods) were characterized by the feeling of an addiction to continue body modification.”

- Study of 82 British residents obtaining their first tattoo
- Both men and women had significantly lower appearance anxiety and dissatisfaction immediately after obtaining their tattoo, and significantly higher body appreciation, distinctive appearance investment, self-ascribed uniqueness, and self-esteem after three weeks

- First reported case of a perforating granuloma annulare-like reaction to a tattoo

- Koebner phenomenon refers to the development of lesions in response to injury of previously uninvolved skin
- Patient with Koebner reaction at the site of a tattoo

- First reported case of allergic contact dermatitis to gold in a tattoo

- 2011 Ontario Superior Court affirmed settlement with individuals who were exposed to blood-borne infection as a result of the use of non-sterile equipment at a tattoo parlour
- Survey of 80 people from an Australian music store with body art
- Tattooed individuals scored significantly higher on need for uniqueness than non-tattooed individuals
- Individuals with conventional ear piercings scored significantly lower on need for uniqueness than individuals with no piercings or with facial and body piercings

- Adolescent patient with septic shock post-surgery
- Shock developed on day 2 post-op after reinsertion of all piercings per patient’s request

Urbanus, A., et al. (2011). People with multiple tattoos and/or piercings are not at increased risk for HBV or HCV in The Netherlands. PLoS One. 6(9). E24736.
- “We found no evidence for an increased HBV/HCV seroprevalence among persons with multiple tattoos and/or piercings, which might be due to the introduction of hygiene guidelines for tattoo and piercing shops in combination with the low observed prevalence of HBV/HCV in the general population. Tattoos and/or piercings, therefore, should not be considered risk factors for HBV/HCV in the Dutch population.”

- 2 case reports of melanocytic nevi and 1 report of melanoma in tattoos
- “At present, the pathogenesis of melanoma developing in a tattoo is unknown. More coincidence cannot be ruled out. However, trauma, ultraviolet light exposure, a photoallergic effect, or an inflammatory reaction may promote malignant transformation.”

- 42 oral piercings in 39 patients
- Immediate complications occurred in 29 cases, including bleeding (69%), pain 52%
- Dental pain and lacerations on the tongue were most prevalent complications with surrounding tissues
- “Individuals wishing to get a part of their body pierced should do so with qualified professionals and should regularly visit the dentist so that a regular control is achieved, thus ensuring the early detection of the adverse effects associated with this practice.”

- New rapid method for determination of PPD in cosmetic products