The 2007 Summary of Published Medical Journal Articles Involving Body Piercing, Modification, & Tattooing

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Summaries of 2007 Abstracts/Articles Available For My Review

- “Although body piercing procurement continues to increase, 13-18% of them are removed.”
- “Only removal elements of “I just got tired of it” and “I just decided to remove it” were present…”
- “Further examination of body piercing building personal distinctiveness and self-identify to promote their need of uniqueness is suggested.”

- “Purposes for body piercing consistently center on personal expression (self-identity) & uniqueness”…
- “Proactive health education for clients and health providers remains a priority.”

- 18-y/o male with facial tics associated with Tourette’s disorder
- Speech dysfluency much better post-tongue piercing

- 54 y/o female from Ethiopia with tattooing of gingival for undisclosed oral disease and pain
- Tattooing was done with a needle, dipped in latern soot and resin from the plant Datura with no relief from pain
- “Practitioners should ascertain whether gingival tattooing has been performed when patients manifest unusual oral pigmentation and be aware of its use in folk medicine for various oral conditions”

- Laser removal is the current removal option of choice

- Patient with bilateral nodules on the earlobes at the sites of piercing earrings.
- Histologically, these lesions presented a lymphomatoid appearance.
- Patient had strong patch test reaction to gold
   - “Dermatology nurses play a pivotal role in pre- and postoperative assessments, through skin important, patient education related to sources of nickel and complications resulting from long-term exposures.”

   - 11 year old male with temporary black henna tattoo and subsequent severe contact dermatitis at the tattoo site with residual hypopigmentation
   - “Henna tattoos are an increasing problem worldwide since they carry an increased risk of severe skin reactions; therefore we suggest that the use of temporary henna tattoos in children be discouraged.”

   - Summary of what does/doesn’t happen with piercings/tattoos & medical imaging

   - 65 year old female who refused to remove nasal jewelry for surgery
   - Nasogastric tube placed in nostril with jewelry (after taping jewelry in place) & later found on end of nasogastric tube

   - Most common allergens were nickel (17.6%)…
   - In women, ear piercing was an important risk factor for nickel sensitization, but no such link in men

   - Review of literature, especially emphasizing the risk for serious allergies to PPD and need for regulation of tattooing & body piercing practices

   - “When tattooed skin receives UV radiation or natural sunlight, photochemical cleavage of the pigments may occur… the decomposition products are hazardous showing a potential risk of being toxic or even carcinogenic. At present, a risk assessment is not feasible since the concentration of pigments and their decomposition products in skin are unknown.”
- “Lip mutilation in the form of piercing the upper lip and inserting a wooden stick called “ndonya” was found only in women”
- “Tooth mutilation does not lead to significant tooth loss & lip mutilation & the use of “ndonya” does not cause oral mucosal lesions in this society”

- 1/3 of respondents had been tattooed in prison in the past & 2.6% had a piercing
- 27% of tattooing & 30% of piercings were carried out using unsafe equipment
- Inmates demanding that piercing/tattooing equipment in prisons be cleaned with bleach

- History of tattoos and summary of medical removal issues

- In 2003, bacitracin was awarded the “Allergen of the Year” award by the North American Contact Dermatology Group
- 42 y/o male with fresh chest tattoo & anaphylaxis to bacitracin he placed on the tattoo
- “Physicians and patients need to be aware of these potential side effects when using bacitracin on damaged skin or mucosal surfaces. With continued use of bacitracin in these circumstances, it has the potential to be come the number one topical allergen in North America.”

- “Acquiring a tattoo in prison was common & the reports of sharing the tattooing needle and ink was high, placing prisoners at risk of acquiring HCV through tattooing in prison. Trials need to be undertaken that evaluate the risk and benefits of legal tattoos in prison.”

- Case of recurrent post-coital bleeding secondary to urethral trauma during sexual intercourse
- 50 subjects with “lower lip studs” compared with 50 non-pierced controls
- 68% of pierced vs. 4% of controls had gingival recession on teeth opposite the jewelry
- Time since piercing & position of the intra-oral disk are associated with a greater prevalence of gingival recession

- Summary of infectious diseases transmitted through tattooing, as well as allergic reactions, granulomas, and tumors related to tattooing

- 31 cases of allergic contact dermatitis due to temporary henna tattoos

- 30 y/o female with strep. endocarditis post-tongue piercing
- Required IV antibiotics & valve replacement
- Not stated in article where pierced (self vs. kiosk. vs. shop)

- Survey of 450 college students (72% female, 28% male)
- “Women with piercings reported substantively and significantly greater frequency of sexual activity than college students without piercings. There were no significant differences in sexual experiences between men with piercings and those without. These findings differ from previous research comparing the sexual activity of college students with and without tattoos.”

- “A relatively short space of time, like the 1 year given for this pilot, isn’t adequate to conclusively establish whether a program affects the prevalence rate of HIV, hepatitis C, & other infectious diseases…”
- “About 45% of Canada’s 13,000 or so inmates receive unsterile tattoos while in jail.”
- “… discontinuing the program is nothing short of ‘public health folly and fiscally irresponsible.’ He argues the $100,00 per prison cost of the pilot completely offsets health care costs if just 4 cases of infection are prevented annually. ‘It’s a sensible investment in public health.’
“We sentence people to be in prison. We don’t sentence them to a greater risk of bloodborne diseases like HIV or hepatitis C while performing a perfectly legal act like obtaining a tattoo.”


“… correctional officers opposed the program, fearing they’d be assaulted with tattooing needles.”

“… taking into consideration the cost of (medical treatment), the STPI (Safer Tattooing Practices Initiative) is cost-effective if one of every 38 tattoo sessions were to result in an “avoided” HCV infection, or if one of every 50 tattoo sessions resulted in an avoided HIV infection. Moreover, the initiative is cost effective if one out of 248 sessions resulted in an avoided liver transplant.”

Although the correctional service commissioner & correctional officers opposed the initiative, 64.8% of prison staff felt the pilot made the institution safer


15 year old male with tricuspid valve endocarditis (Staph) post-ear piercing
- Not stated in article where pierced (self vs. kiosk. vs. shop)


Two children with contact dermatitis post-black henna tattooing with PPD additives


“We believe that the reason that the youngest cohort in this cross-sectional study had fewer tattoos is related to the fact that tattoos are cumulative and this youngest group had not yet had time to acquire a tattoo. … up to 66% of the the youngest cohort either were tattooed or were considering getting a tattoo, emphasizes this.”


Case of marked gingival recession accompanied by substantial bone loss caused by piercing the lower lip & tongue
- “Dental practitioners should be aware of the increasing number of patients with pierced intraoral and perioral sites and be prepared to provide appropriate guidance to patients who contemplate body piercing that involves oral sites.”
- Summary of diagnosis & treatment of rare case of tuberculous labialis caused by tattooing

- Overview of possible problems associated with oral piercings that may be encountered by dentists

- 24- y/o male with testicular cancer and lower back tattoo
- False positive PET scan due to tattoo pigment in lymph nodes
- “We recommend that when a PET scan is requested, the presence of decorative tattoos should be documented alongside other clinical information.”

- “Given that the oral cavity is one of the most frequent sites for piercing placement, the aim of this paper is to familiarise the oral healthcare professional with oral piercing and its possible sequelae in order to educate patients prior to and after piercing practices and address any complications that may arise.”

- “Calm conversation between the individual and a physician, particularly a dermatologist with experience in medical psychology, can clarify the risks and lead to better understanding of the motivators for such behavior.”

- Overview of new laser tattoo removal techniques

- Two cases of squamous cell carcinoma and a keratoacanthoma appearing over tattoos
  - “All patients who are taught to require upper endoscopy should be asked to remove any tongue piercings… Plastic stays or “keepers…” should not be used because they carry an equal, if not higher, risk of dislodgement.”
  - Recommends removal or if removal is refused, informed consent as to risks

  - 5 patients, ages 3-34 who underwent temporary tattoos & now had skin issues at the previously tattooed areas
  - None had previous contact with hair dyes or tattoos
  - 3 of 5 were sensitized to PPD

  - Imiquimod appears to be a useful adjuvant to experimental laser tattoo removal in guinea pigs

  - Four black females of West African origin with cultural gingival tattooing
  - “Outside of Africa, it may be misinterpreted as racial pigmentation of pose a diagnostic puzzle.”

  - Over 2-year period, 6 women, ages 14-38, presented to dermatology clinic with allergic contact dermatitis to PPD
  - All had previous “black henna” temporary tattoos & now reacted to PPD in hair dyes
  - It’s rare to react to pure henna, but PPD added to intensify the dark color, sharpen definition, speed up the tattooing process & makes the tattoo last longer
  - Can cross-react with PPD allergy to: Hair dyes, fur dyes, printers ink, photographic/lithographic work, latex gloves, support stockings, PAPA (in sunscreen), certain ester anesthetics (benzocaine, tetracaine, procaine), thiazide diuretics

  - Topical imiquimod is not effective as an adjunct to laser-assisted tattoo removal
- 11 year old girl with auricular perichondritis post-piercing with a gun at a hair-dressing salon & she returned to same salon 4-days post-piercing for a haircut
- Failed oral antibiotics and required IV antibiotics & surgical debridement
- Public health inspection of hair salon found pseudomonas in a water bottle used to wet the hair
- “Auricular or high helical ear piercing using a piercing gun is not recommended.”

- Summary of religious attitudes and use of tattoos

- “Young adults believe that body piercing is highly acceptable among the general public. Furthermore, though they believe such body art is acceptable on others, they feel it is less acceptable on themselves. Study participants displayed a high level of awareness regarding the potential health risks of body art, and, in fact, overestimate those risks…”

- First documented case of pyogenic spondylitis post-ear piercing
- Treated with antibiotics and bracing
- Not stated in abstract where pierced (self vs. kiosk vs. shop)

- “While it was worrying that most patients in our group did not seek advice before having body art, it is of greater concern that those who did seek advice were given such widely varying recommendations, from avoidance of body art altogether to taking no precautions at all.”
- “It is debatable whether the responsibility lies with the cardiologist. We think it should lie primarily with the practitioners of body art. On the other hand, doctors should be aware of the risks involved, so that they can give clear advice (if they are consulted) on the risks of this cosmetic, but potentially lethal practice.”
- “For the time being, in our own practice, we strongly discourage all forms of body art and we recommend antibiotic prophylactic cover where individuals cannot be dissuaded, with strong advice for prompt treatment of any signs of subsequent infection.”

- 1897 young adult male military recruits (476 with tattoos & 1421 without tattoos)
- Increased chance of testing positive for Hep B & especially Hep C if had previous tattoos

- 183 participants surveyed who had piercings other than earlobes
- Ages ranged from 18-21 years
- “In this population, body piercing in women was associated with sexual behavior. Having multiple heterosexual partners or any same-sex partner was very rare among women without piercings… The associations with sexual behavior in men were waker and not statistically significant.”

- “Burns can be caused when electrically conductive material is introduced within the magnet, for example… tattoos and eyeliners which contain iron-oxides.”

- “From childhood, many are taught not to judge based on appearance. Whether viewed as an act of morality, ethics, or decency, such early lessons focus on the fact that how a person looks is just a small part of who that person is. However, many people have a difficult time ignoring how a person looks when it comes to drawing conclusions about potential friends, companions, employees, or even health care practitioners.”
- “Employees in many industries have enjoyed relaxed standards in the past decade. Where business suits and hosiery were once the rule, it is increasingly acceptable for staff to wear more casual clothing, display visable tattoos and multiple piercings (in the ears or elsewhere on face), and sport less-conventional hairstyles.”
- “Research has shown that when it comes to healthcare, not only are consumers very specific in their preferences for what practitioners should look like, but there has been a documented ‘strong association’ between physicians’ physical appearance and patients’ initial perceptions of physician competence.”
- “At present, tattoos and piercings can no longer be regarded as destructive acts of self mutilation practiced by fringe groups.”
- Body modifications “often serve to express individuality and identity, and they also reflect changed attitude towards the human body and body art as well as following fashion trends”

- Summary of body piercing history, sites, and legislation to “ensure that the risks inherent in body piercing are lessened.”

- Study of gaze duration of 50 individuals while watching plain, scarred, accessorized, and tattooed bodies
- Males paid more attention to tattooed stimuli of both sexes, particularly tattooed stimuli were looked at longer
- Suggests tattoos might have some signaling value… and affecting mating decisions (evolutionary)

- Overview of surgical removal of tattoo options

- “in a recent large-scale survey among Israeli young adults, more than half of the study population was not aware of any of the complications of oral piercing.”
- …dentists should be prepared to… provide appropriate guidance to patients contemplating body piercing that involve the oral sites. Since common knowledge is poor, patients should be educated regarding the dangers that may follow piercing of the oral cavity.”

- Case reports summarizing the treatment options for removal of tattoos