The 2008 Summary of Published Medical Journal Articles Involving Body Piercing, Modification, & Tattooing

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- Adult patient with previous history of sarcoidosis developed sarcoidal granulomas restricted to one pigment of a tattoo

- Time to skin side effects post-tattoos can range from direct complications during or following tattoos to reactions that first appear several years later
- “The majority of allergic complications can be explained by the delayed degradation of the color pigment used for the tattoo and then release of potent allergens sometimes not until years later.”

- 1996 & 2006 studies compared for motivations for tattoo removal
- More women (69%) than men (31%) had tattoo removal in 2006
- “In both the 1996 & 2006 studies, a shift in identity occurred, and removal centered around dissociating from the past... Rather than having visible tattoos, women may still want to choose self-controlled body site placement, even in our contemporary society.”

- Review of 23 published cases of endocarditis post-body art
- Co-authored by myself, Dr Armstrong, & Dr Cetta (Mayo clinic cardiologist)

- First reported case of an adverse event caused by the recreational use of PMMA (synthetic polymer with multiple uses in industry & medicine) in the form of an invisible tattoo granuloma

- 17 year old female who developed a breast abscess 4 months post-piercing
- Review of 12 previously published cases of nasty infections post-nipple piercing
- Not stated in abstract where pierced (self vs. piercer)

- Tattoo pigment absorption spectra can explain why some colors are more resistant to removal

- Newly developed cooling pad applied to treated area (including tattoo removals,) which minimizes collateral thermal damage to adjacent tissues

- Brief summary of new applications for laser therapy, including tattoo removal
- Survey of 10,503 adults in the UK
- Nearly half of women aged 16-24 reported having a piercing (other than earlobe)
- 10% of sample had a piercing (other than earlobe)

- Thimerosal is a preservative that has been used in some tattoos
- One of the least likely chemicals to cause contact allergy

- 23 year old female with tongue piercing who underwent oral endoscopy (refused to remove jewelry pre-endoscopy)
- Endoscope was damaged by jewelry

- Summary of current medical & surgical treatments for keloids

- 58- year old female with granulomatous dermatitis due to to eyelid tattooing
6 cases in literature of this occuring

- 2 patients with cellulitis post-eyebrow piercing
- Not stated in abstract where pierced, i.e. home vs. kiosk vs. shop

- Intrakeloid resection & form-pressure device to treat pinna keloids & avoid recurrence

- 46-year old female who had permanent cosmetic eyelid tattoo & the needle/ink went all the way through the eyelid into the eye
- Eye did fine, but did have permanent discoloration of the eye

- Photo pictorial of tongue jewelry removal techniques for anesthesia professionals
- Also has several photos of retainer options
- Co-authored with nurse anesthetist & professional body piercer

- Summary of “top 10 medical myths vs. research realities” regarding body art
- Co-authored with Elayne Angel
   - Summary of risks/issues associated with permanent cosmetics

   - 5-year old male with temporary henna tattoo
   - Developed hypertrichosis 2-weeks post application
   - Resolved spontaneously after 4 months

   - Red pigment 22 studied in tattooed skin
   - “High concentrations of colourants are injected into the skin during tattooing and based upon this quantification, a risk assessment of tattooing ought to be carried out.”

   - 2 patients with atypical mycobacterial infections of body piercing sites
   - Not stated in abstract where pierced, i.e. home vs. kiosk vs. shop

   - 6,095 adolescents surveyed & 4,439 were patch tested for contact allergy
   - 11.8% female & 1.6% male nickel allergies
   - “The prevalence of body piercing and orthodontic treatment has increased during recent decades. Such changes in lifestyle may influence the occurrence of nickel allergy.”

   - “Apart from the well known significance of nickel… other metals such as aluminum, beryllium, chromium, cobalt, copper, gold, iridium, mercury, palladium, platinum, rhodium, & titanium represented emerging causes of skin hypersensitivity.”

   - 38-year old male with skin cancer on a 1-month old tattoo
   - First case of eruptive keratoacanthoma carcinoma arising in a multicolor tattoo

   - 4,000 person survey of patients at German dermatology clinics
   - 8.6% of patients had piercings other than earlobes

   - 26-year old female with elective tattoo removal with laser
   - Developed blistering at tattoo site with both removal sessions which resolved with topical wound care
   - Summary of other complications associated with laser tattoo removal (scarring, “undesired pigmentary alterations,” carcinogenesis from laser-cleaved pigments
- 26 year old, heterosexual male with urethral discharge/penile edema two days after reverse PA replacement
- Clinically had genital warts at the piercing tract openings
- Discussion of how the genital piercing may have affected the multiple infections, possible contribution of the piercing to the penile edema, & potential spread of warts associated with a genital piercing

- « Case report of 2 patients with immunologic reactions after laser tattoo removal
- Patients developed transient immunoreactivity that presented as regional lymphadenopathy after removal of professional black & blue-green tattoos – reactions resolved without any complications »
- « tattoo pigments released or modified by laser therapy may trigger transient immunoreactivity in susceptible individuals »

- 3 patient with tattoos & chronic dermatitis, who during patch allergy testing, the green color of the tattoo became inflamed
- All 3 had positive reactions to potassium dichromate 0.25% in petrolatum

- “The very low concentrations of lead measured in these henna samples were reassuring; however, the cumulative effects of prolonged lead exposure may be of concern. Thus, the use of henna especially among children may constitute a public health risk.”

- 27-year old female with a 4-year old cosmetic lip tattoo – granulomatous reaction surrounding the tattoo pigment
- Resolved spontaneously without treatment

- Summary of medical issues with body modifications

- Patient requiring extensive dental surgical repair for injuries to oral tissues associated with labret piercing

- Summary of increased effectiveness of new laser type/technique for tattoo removal
  - Summary of another previously published study on physicians with piercings and patient/colleagues perceptions

  - 38-year old male with multiple tattoos over 20 years prior
  - Developed swelling of axillary lymph nodes & diagnosed with tattoo-induced lymphadenopathy

  - 41-year old female with no medical history – developed keratoacanthoma (rare type of skin cancer) in a tattoo site

  - Summary of authors feelings regarding antibiotic prophylaxis pre-body art (suggests it)
  - “More than ever, a close cooperation between physician and professional (body artist) is needed to improve the safety of body art procedures.”
  - Wrote an article for a French tattoo magazine on endocarditis concerns with tattooing

  - Overview of side effects from natural henna & henna with PPD added
  - “In the absence of any legal control of henna tattooing practices, prevention requires the annual provision of information to Western consumers, especially young people and their parents”

  - 2 adult patients with DF in a tattoo
  - “We believe that DF should be added to the list of the benign inflammatory/tumor reactions occurring in tattoos.”

  - “To date, given the number of individuals being tattooed around the world and the rarity of cancers in tattoos, this association should be considered coincidental.”

  - Letter to editor in reply to a previous article
  - Suggests non-hollow bore needles for epidurals & lumbar tattoos

  - “Beauty is in the eye of the beholder, but when it comes to body art on your employees, it’s best to limit who gets to do the beholding…”
  - Brief summary of EMS issues with employee body art
- 105 undergraduate students rated a photograph of a woman with or without visible facial piercings
- “Analysis indicated the model with visible piercings was rated more religious and more creative, artistic, and mysterious.”

- Repeat of 2001 study
  - 51% of college students pierced & 22% tattooed
  - “Medical complications occur frequently among those with piercings”

- 7 types of “tattoo seals” & 3 types of eye makeup tested in a 3.0T MRI for deflection from magnet
- 85% of tattoo seals showed deflection & eye shadow as well (not stated %)
- Deflection due to iron oxide & other ferromagnetic pigments
- Very little movement due to the very small amount (mass) of ferromagnetic pigments
- “… it is desirable that these should be removed before MRI examination to prevent secondary problems”

- 15 y/o female with right sided endocarditis post-navel piercing infection
- Required IV antibiotics & surgical repair & died shortly after surgery
- Not stated in article where pierced, i.e. home vs. kiosk vs. shop
- 23’rd case of endocarditis post-piercing or tattooing

- 25 male patients with penile implants to increase penis size or increase feelings of sexual partners
- 92% had injection of fatty substances & 8% had plastic pellet insertion
- 56% of patients with mineral oil insertions had fistulas & wide ulcers

- 2 experiments with 158 community college students
- Photos of female model with and without tattoo (dragon or dolphin)
- Survey of 13 characteristics found majority of participants had negative reactions to models with tattoos (more with dragon than dolphin)

- 20 year old female 3-weeks post-helical piercing at a shopping mall
- Pseudomonas infection which required debridement & IV antibiotics

- Summary of surgical reversal of nipple piercings
- Survey of 28 UK anesthesiologists about regional (epidural) anesthesia in labor/delivery with patients with lumbar tattoos
- Interestingly, 100% would NOT refuse regional anesthesia, but would avoid the tattooed area if possible

- 14 year old male who had a black henna tattoo placed one near prior
- Developed facial edema post-hair dye exposure (PPD exposure)
- “In Canada, the Food & Drug Act states that it is illegal for cosmetics containing PPD to be sold for direct application to the skin. This would include black henna tattoos with PPD. However, people who apply black henna tattoos at amusement parks or holiday resorts are not required to disclose ingredients.”
- “We recommend that physicians counsel their patients to avoid getting black henna tattoo because these tattoos can cause potent skin sensitization to PPD that can lead to serious skin reactions.”

- 6-year old male with severe generalized erythema multiforme-like contact allergy to PPD secondary to a henna tattoo
- “This presentation also highlights the call to ban the use of para-phenylenediamine and its derivatives in dyes.”

- 303 adult patients examined for gingival recession & found that past orthodontic treatment &/or oral piercing were associated with recession

- “Nickel exposure from inexpensive earrings is frequent in the United States. A regulatory governmental intervention may be warranted.”

- 100 pediatric patients with embedded earrings presenting to an ER
- 35% had an infection at the embedded earring site
- “Young children are likely overrepresented in the occurrence of this problem, which supports the American Academy of Pediatrics recommendation to postpone ear piercing until self-care is achievable.”
- Not stated in abstract where pierced, i.e. home vs. kiosk vs. shop

- 3x higher odds of being hep C positive for inmates exposed to tattooing than non-tattooed inmates

- 2 parts of the United States during the cold war was briefly tattooing blood types on children to make a “walking blood bank” in case of atomic attack
The idea ultimately failed because physicians did not trust tattoos for medical information.

- 17 year old female with a black/red colored tattoo
- Immediately post-red tattooing developed malaise, fever, nausea, & vomiting, followed by blistering in the tattoo – subacute dermatitis with bacterial superinfection
- Two months later developed painful nodules on both legs – erythema nodosum without sarcoidosis
- “There is an indispensable need for regulation of tattoo pigments and tattooing to improve customer safety”

- Nice, non-biased, overview of female intimate piercings & medical issues

- PPD was chosen as the “allergen of the year” by the American Contact Dermatitis Society
- Reminder as to increased risk of PPD contact by kids with temporary tattoos