The 2006 Summary of Published
Medical Journal Articles
Involving Body Piercing, Modification, & Tattooing

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- “There was no difference in the frequency of a final diagnosis of acute appendicitis or pelvic inflammatory disease in female patients with & without periumbilical piercing. Health care professionals should not allow their clinical judgement to be prejudiced by the presence of body piercing.”

- “As any skin watche knows, tattoos have become mainstream. But, wow! One fourth of the US adult population has been injected with tattoo-inks – essentially unknown, unregulated substances that stay with the body for life.”
- “For the record, I am staunchly neutral on the merits of tattooing, & plainly in favor of reasonable regulations to reduce its medical risks, which include infectious disease transmission, tattoo ink toxicity, phototoxicity, allergy, & botched artwork. Personally, I have no doubt that federal & state government should regulate tattooing; that tattooists should be trained, licensed, required to keep records, & reviewed for compliance & complications; and that unsafe inks or equipment should be removed from the market.”
- “… We should harbor no prejudice against patients with tattoos or body piercing. Most of my patients with tattoos, & especially those seeking tattoo removal, seem to be just a somewhat more colorful crosscut of greater Boston society.”

- Survey of 824 people ages from 14-52
- 93% of piercings & 79% of tattoos were done in “professional establishments”
- 46% of piercings & 31% of tattoos had “complications” (mainly local)

- Study of 37 subjects with only genital piercings
- “Nurses need information about people with genital piercings so that they may provide non-judgemental, clinically competent care.”
- “General & subjective information about those who chose to obtain genital piercings was presented. Particularly, the assumptions made from the literature are refuted by objective & subjective data collected from intimately pierced individuals themselves. Professional nurses must not base practice decisions
on assumptions, but on the “best evidence with clinical experience, research, (as well as) associated patient values.”

- 2 pregnant women with genital piercings – one was asked to remove the clitoral jewelry for delivery & the other was not asked to remove it & delivered with the jewelry in place (no issues for mom or baby)
- Referenced an article which suggested “plastic barbell retainers” for nipple piercings to maintain patency while breastfeeding if the piercing is well established and healed prior to pregnancy

- Patient undergoing panoramic films for an impacted molar was found to have an earring clip impacted in her ear lobe that she was not aware of

- “Cartilage is avascular & requires metabolic support from the adherent perichondrium. Transcartilaginous piercing, performed most commonly with multiuse ear piercing funs, results in traumatic disruption of the cartilaginous-perichondrial relationship. In addition, piercing allows for the introduction of local microflora into an otherwise sterile & poorly vascularized subcutaneous area.”
- Pseudomonas & Staph are the typical infections for ears
- “The increasing popularity of upper ear piercing, lack of regulatory control, & the performance of the procedure by unlicensed & poorly trained personnel could lead to further outbreaks in the future.”

- “Of 997 minority high school students, 8.6 had tattoos and 8% piercings (excluding earlobes). 21% with tattoos & 59% with piercings would not repeat the experience. 58% with tattoos & 43% with piercings reported parental knowledge before the procedure. 75% & 80%, respectively, were asked for proof of parental consent.”
- 28-year old woman with tongue/lower lip piercing demonstrated localized severe periodontitis as a destructive long-term outcome related to oral piercing.
- She had worn 2 tongue rings & labrette for 12 years
- Plaque & calculus accumulation, severe inflammation, tooth mobility, severe horizontal radiographic bone loss, & deep pocketing were observed in teeth affected by the jewelry

- Nice summary of history and current use of lasers for tattoo removal

- 16-year old female with nodular lesion above her lip for two months post-having her right nostril pierced
- Diagnosed with nodular fasciitis, a rare and benign lesion that can be treated by simple surgical excision
- Not stated in abstract where pierced (shop vs kiosk vs self)

- Very nice overview of body mods with mention of the APT & APP standards

- One case of multiple tooth fractures as a result of trauma incurred from a tongue barbell

- “Compared to results reported with 1064-nm laser treatments, where several laser procedures are necessary, better clearance and scar quality was observed. Compared to mechanical dermabrasion, the procedure is more reliable and causes fewer side effects.”

- Overview of body piercing medical issues
- Case study of 17 y/o male with tongue edema/respiratory distress three days post-tongue piercing by a friend
- Strep infection & required intubation x 24 hours for respiratory distress & was discharged on oral antibiotics
- 19 year old pregnant female with a nipple tumour
- First reported case of fibrous histiocytoma-like spindle-cell proliferation in the nipple after body-piercing

- “Although once the preserve of tattoo artists, units within the UK have increasingly begun making use of the Clinical Nurse Specialist (CNS) to perform areola tattooing. Bringing the technique within the Breast Unit enhances continuity of care & makes use of skills that can be provided by the CNS.”

- Summary of body jewelry removal techniques & medical myths
- Co-authored with piercers Troy Amundson & Elayne Angel

- Introducing the idea of a professional piercer on call
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- Summary of outpatient surgical issues with body piercings
- Co-authored with piercers Troy Amundson, Elayne Angel, & Jim Weber

- Summary of diagnostic imaging (X-ray, CT, & MRI) issues with body modifications
- Breakdown & discussion of case reports involving airway management & body piercings
- Co-authored with Michelle McNeil – nurse anesthetist & body piercer, Troy Amundson

- Young girl with unicorn tattoo on the right lower quadrant at the point of appendicitis

- Self report study of 2180 12-18 year old students
- “Nowadays, tattooing & body piercing are perceived by many as body decoration, increasingly belonging to the realm of generational conformity. Contrary to this view, our results suggest that these practices among adolescents are mostly adopted by those who are involved in various deviant or illegal activities, which are often interrelated.”

- 20 y/o female with various tattoos/piercings & gunshot wound to the abdomen
- On CT scan, was found to have to have a metallic foreign body in the abdomen, which was her swallowed tongue jewelry
- “Oral cavity piercing should always be inspected for in trauma patients with other obvious signs of body art. If not found possible digestion or even inhalation should always be considered when interpreting thoracic and abdominal imaging in the acute setting.”

- 16 year old female with tricuspid endocarditis, 3 months after a navel piercing
- Not stated in abstract where pierced (shop vs kiosk vs self)

- Brief summary of removal techniques
- Development of a method to determine the concentration of pigments & their decomposition products post-laser removal

- 13 year old girl with vertical gaze palsy caused by underlying infective endocarditis, secondary to an infected navel piercing
- This case illustrates that infective endocarditis does not always present with classic signs
- Not stated in abstract where pierced (shop vs self)

- 25 year old female with permanent cosmetic tattoos of upper eyelids
- First degree burns of eyelids during MRI
- Recovered without sequelae
- Lead, copper, zinc, chrome, arsenic, cadmium, barium, & mercury in manufacturers list of chemical characteristics of tattoo
- “Because the ferric acid pigments are not necessarily the sole cause of noxious side effects as generally supposed, we suggest that the patient must be explicitly informed about the danger of such burns, even if the analysis certifies that the tattoo components are free of ferrous content. Furthermore, we suggest that a corresponding item be added to standardized MRI informed consent forms. Finally, in the case of insufficient diagnostic alternatives to MRI, sedative medication should be avoided and continuous visual and audio monitoring are mandatory to timely recognize side effects of cosmetic tattoos.”

- 18 y/o female with 2 month history of neuropathic facial pain which started one month post-tongue piercing
- “The syndrome was probably secondary to a lingual metallic implant, and although findings indicate involvement of the trigeminal system, the location of the piercing and implant should not have resulted in trigeminal injury.”
- First published report of atypical trigeminal neuralgia associated with tongue piercing
- Not stated in article where pierced (shop vs self)
- “Spawned the Associated Press articles on the “suicide piercing disease”
- “The traditional practice of cutaneous adornment is rich & vast among the Yoruba in the South-Western part of Nigeria… This rich cultural heritage, however, has more or less given way to the values of Western culture, together with the disadvantages of the latter, manifesting as sequelae on the skin.”

- two cases of sarcoidal-type allergic contact dermatitis due to metals in ear piercing
- Palladium in one & nickel/copper in the other

- “Tattoos & piercing, though they appear as something like a trend, if not a craze, remain for a majority minority and even fringe practices. For the adolescent, questing for his identity (no more a child, not yet an adult), the tegmental sign is a way of engraving in the flesh dramatic events of his existence. The body mark is a search for independence, a symbolic attainment of self-reliance, a way of severing the umbilical cord and of asserting oneself. In face of a life no longer under control, the body is an object at hand on which self-will is almost unbridled… These body modifications testify to change.”

- “Safety of blood & blood products is a major problem all over the world… the most commonly defined causes (of deferral) were recent sexual exposure in high-risk activity… tattoos, piercing or acupuncture in the preceeding six months…”

- Report of a patient known to have swallowed a “tongue stud” presenting with chronic right iliac fossa pain & the jewelry was found at surgery to be lodged in his appendix

- “In a large sample of individuals who belong to a website for body modification, having body modifications (e.g. piercings, tattoos, scarification, & other surgical procedures) was associated with with a higher incidence of prior suicidality (i.e. suicidal ideation & attempted suicide). However, controls for self-reported depression weakened the strength of these associations.”

- 68 year old male with keloid like nodules in ears
- Had ears pierced 10 years prior & briefly wore “inferior grade titanium” earrings
- “Although it appears to represent a rare event, awareness among dermatologist of the possibility of a granulomatous reaction to body piercing with titanium alloy is important.”


- Contractubex gel is effective in scar prevention in Chinese patients having laser tattoo removal


- 5,282 college students studied with questionnaire & blood samples
- 2% reported IV drug use, 14% intranasal drug use, 21% body piercings, & 25% tattoos
- « … there was no increased risk for HCV or HBV infection in low-risk adults based solely on history of cosmetic procedures or snorting drugs. »


- “Temporary henna tattoos are readily available worldwide, last on the skin for several weeks, & offer a self-limited, convenient alternative to a permanent tattoo.”


- Summary of Turner syndrome with notation of increased risk of keloids with body piercing


- “Our animal experiments confirm that a blue tattoo ink containing titanium is a key element in poor response to the Nd-YAG laser.”

- “Although the potential hazards of regional anesthesia in patients with lumbar tattoos remain controversial, it may seem prudent to avoid a hollow needle insertion (possible tissue entrapment in its bore as the needle passes to the deeper structures) through a tattoo for neuraxial blocks.”


- “Despite their movement into mainstream society, literature to aid in counseling of teens about these issues is scant. The practitioner dealing with this population of patients must be armed with the information necessary that will help adolescents make informed decisions about tattoos & body piercings.”


- Random phone survey of 500 adult people in the US
- 24% had tattoos & 14% had body piercings


- “Body piercing in young adults is on the rise in Western countries & also in Korea.”
- One case of endocarditis in a healthy person post-ear piercing


- 91 subjects with lip piercing & labrets vs. 54 subjects with no oral piercings
- 68% of pierced subjects had gingival recession vs. 22% recession with no oral piercings
- “We concluded that a clear link exists between lip piercing, labret use, & gingival recession… Belief that labret placement & configuration can be modified to provide protection is unfounded.”


- 44 people (15-42 years old) with MRSA post-tattooing by 13 unlicensed tattoo artists
- “Computer ink-jet cartridges for ink!”
- Overview of body piercing issues for school nurses

- Summary of medical literature regarding laser tattoo removal

- Nice brief summary of teen psychological issues with body modifications

- Summary of allergic contact dermatitis in children, including PPD in henna tattoos

- 23 year old female with black & turquoise tattoo 10 months prior to symptoms
- Sarcoid granuloma in black, but not turquoise parts of tattoo


- 17-year old male with self-piercing of tongue with a sewing needle
- Left the needle in overnight due to swelling & inability to remove before presenting to the ER
- Removed under local anesthesia & did well
- At follow up, “the patient reported that he had ordered a special needle for tongue piercing and was going to repeat the procedure!”

- 20-year old female with a hypertrophic lesion of the tongue associated with a recent piercing
- Not stated in abstract where pierced (shop vs kiosk vs self)

- “Dermal pigments from tattoos can be imaged in vivo using CLSM. This application of CLSM has an important future potential for pre-removal
evaluation of tattoos before laser removal, predicting good or poor outcome of laser removal.”

- 664 Brazilian adolescents – 8.4% had body modifications
- Sexual experience, illicit drug, alcohol consumption, and anti-HBc positivity were independently associated with body modifications

- “Tattooing is a fairly widespread practice worldwide, despite the trauma it entails & the potentially toxic pigments it employs.”
- Case report (only 10 described in the literature) of a malignant melanoma that developed on a nevus on with a tattoo had been made

- 10% of respondents to survey had an oral piercing – 508 questionaires sent to 5 high schools
- “… students who are getting oral piercings are doing so without parental consent & often show signs of infection”

- “A heavily tattooed man presented with nodular, ulcerated sarcoiadal lesions distributed throughout all the colors of his tattoos. The lesions developed within the confines of his tattoos 4 months into therapy with ribavirin & interferon-alpha for chronic hepatitis C. This appears to be the first case of sarcoidosis in association with numerous pigment colours as well as dual therapy for hepatitis C.”

- “Tattoos among females & body piercing in both genders were statistically associated with eating disorder measures related to bulimia symptoms. On the whole, the degree of association was modest. Tattoos & body piercing should be seen as desires to show a subject’s identity rather than as a marker of psychopathology.”
- “By becoming more aware of the health risks to which athletes are exposed, health professionals can learn to recognize these unhealthy behaviors and recommend appropriate prevention & cessation strategies to their patients who participate in sports.”

- “A needle passed through the tattoo can entrap pigmented tissue fragments (cores) into the epidural or subarachnoid space. This could theoretically induce risk of late neurologic complications, related to an inflammatory or granulomatous response to the pigmented cores introduced in these spaces. To avoid this theoretical risk, the anesthesiologist should try to avoid puncturing through the tattoo, either by selecting a different vertebral interspace, or by using a paramedian approach or by finding a pigment free skin spot within the area of the tattoo. When these options cannot be implemented, a superficial skin incision prior to needle insertion should prevent from coring tattoo pigment when entering the skin. Whatever the final choice, the technique to be implemented should be determined as early as the antenatal visit, after informed consent.”

- 520 college students questioned to determine correlation between having a tattoo and the presence of tattoos among their family & friends
- 75% of five closest friends had a tattoo & 29% had at least one family member with a tattoo as well

- Patient who presented for a panoramic film for an impacted molar was found to have an impacted earring clip as well

- 123 pierced patients & 22 piercers given a questionnaire
- “The majority of piercers reported adequate cross-infection measures & enquired about their clients’ health prior to piercing. However, only one piercer was aware of the risk of bacterial endocarditis following tongue piercing. Most of the piercers reported that they would advise their clients to attend an Accident & Emergency Department if a serious complication occurred.”
- “Although the majority of piercers interviewed reported adequate cross-infection controls, knowledge of the medical risks associated with tongue piercing varied widely.”
- Investigation of MRSA strains among inmates in a Wisconsin correctional facility suggested a shift in MRSA genotype
- Index case linked to an infected new tattoo

- Prevalence of tattooing & body piercing in the general German population is 8.5% & 6.5%
- “Next to being motivated by fashion & the urge to fit in with one’s peers, the major reasons for body modification practices in the German population appear to be negatively perceived conditions of life, reduced social integration, & increased sensation-seeking behavior.”

- Summary of current tattoo removal options

- 30 year old female with severe dermatitis on the eyelids & peri-orbital regions, as well as conjunctivitis after permanent black eyelash & eyebrow tinting

- 4 patients with inflammatory eyelid reactions after receiving permanent eyeliner tattoos
- All tissue showed inflammatory response with negative cultures
- “Treatment can be challenging & may ultimately require excision of tattoo pigment to remove the inciting factor. Systemic steroids may aid in controlling the inflammation associated with the reaction to the tattoo pigment.”

- Case of a 19 year old female with a black crust on one part of the tattoo on her leg which appeared after laser-assisted hair removal
- Case of a 28 year old male with a burn on part of a tattoo after laser hair removal

- “The main finding of the inspections over the years is that written guidelines are not sufficient to improve safety. Regular inspection visits, with verbal instruction, are needed.”
- “Recently, discussions also have started within the EU for a pan-European legislation, which will be modeled on existing (national) guidelines…”