The 2010 Summary of Published Medical Journal Articles Involving Body Piercing, Modifications, & Tattooing

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List of 2010 Published Medical Articles on Body Art


Summaries of 2010 Abstracts/Articles Available For My Review

- “Data regarding tattoo practices in the Gulf region and response to treatment are almost non-existent in the medical literature.”
- “More females than males had tattoos, and at a very young age and mostly on the advice of their parents. The majority of patients wanted to remove the tattoos because of religious reasons.”
- “The Q-switched laser seems to be highly effective in removing amateur blue-black tattoos in patients with colored skin.”

- 41 y/o male diagnosed with systemic sarcoidosis which first manifested in his black tattoo

- Survey of 968 people – 476 with piercings & 492 with permanent tattoo
- Determine motivations for body ornamentations
- “The main reasons for body ornamenting in the Polish population are the desire to enhance one’s individuality and the need to increase sexual attractiveness.”

- “The use of disposable needles for ear-nose-body-piercing need to be promoted through public awareness programmes as a preventive strategy.”

- Patient who developed sarcoideal granulomas within the black pigment of tattoo, which led to the diagnosis of pulmonary sarcoidosis

- 51 y/o male who presented with red areas over a tattoo on the back 10-days after tattoo placed – culture positive for M. abscessus

- 10 year study of children with jewelry and ornament related injuries
- 380 cases were jewelry related – 5 were secondary to piercing
- 4% of respondents had a tattoo and 24% had a piercing
- 62% of respondents expressed the desire for a tattoo & 35% for a piercing
- Subjects with tattoos and piercings are more likely to have familiar conflicts

- 144 children – 5% reaction to chrome, 10% reaction to cobalt & 20% reaction to nickel
- Patients with pierced ears were more likely to react to nickel than those without pierced ears
- “In view of the current tendency for the prevalence of nickel allergy to increase, parents should be warned about its association with ear piercing. Further studies are needed to determine the ideal age for ear piercing and the ideal materials for earrings.”

- Analyses accounting for behavior risk factors and neighbourhood characteristics do not support a association between body art and hepatitis C infection among IV drug users

- “… our review suggests that in the countries where the studies have been conducted, general practitioners may find it useful to screen for high-risk behaviours in body-pierced subjects, investigate psychiatric symptoms such as suicidal ideation and help patients explore the role of body piercing in their identity.”

- 18 y/o female with infective endocarditis due to Gemella morbillorum post-oral piercing
- Not stated in abstract where pierced, i.e. home vs. kiosk vs. professional piercer
- Not stated in abstract whether she had prior heart disease
- “Careful observation for infection at the site of piercing and its treatment as well as professional training for operators seems to be the most effective way to minimize the risk of infective endocarditis after body piercing”
- Survey of 4,277 Italian students ages 14-22 about body art risks
- Boys were less knowledgeable about infectious diseases, body art parlour hygienic norms, and to refer as needed to a certified medical professional when complications occur

- Survey of 4,277 Italian students ages 14-22 who expressed indifference or no interest at all in body art
- Factors towards indifference towards body art: Higher school year, increasing father’s education, and greater perception of the associated health risks
- “Proactive health education campaigns by school educators and family physicians should focus on adolescents of less educated fathers and pupils less aware of the health risks associated with body art. In this respect, junior secondary school students can be regarded as the ideal target of such campaigns.”

- Review of principles of laser tattoo removal techniques and prevention of complications

- One case of lichenoid dermatitis from reaction to red pigment of tattoo
- One case of pseudolymphoma from reaction to red and lilac pigments and photo-induced reaction to a yellow pigment
- “Removal generally requires multiple forms of treatment, most of which fail to remove the colors completely.”

- “… our findings suggest that the Q-switched alexandrite laser is an effective laser in removing amateur tattoos in patients with skin phototype V, but with a high incidence of pigmentary changes.”

- 60 y/o & 56 y/o males with history of HIV/hepatitis C and PA piercings
- Found to have squamous cell cancer at PA site
- Review of 68 patients with primary breast abscesses
- Nipple piercing is associated with an increased risk of developing subareolar breast infections

- “High efficiency is reached in the removal of in vivo tattoos by using an irradiation wavelength at which the percentage of reflection from the pigment is minimal. Under this condition, laser pulses can be used with low fluence, minimizing adverse effects and clinical time.”

- Young girl, no history of heart disease, with bacterial endocarditis and multiple cerebral, kidney, and spleen embolisms from S. aureus post-nasal piercing
- “This case highlights the importance of education of patients with and without structural heart disease to the potential dangerous and even life threatening infectious complications of piercing, and stimulate further discussion on the possibility of antibiotic prophylaxis of such procedures.”
- Not stated in abstract where pierced, i.e. self vs. kiosk. vs. professional piercer

- 22 y/o male with severe allergic reaction and keloids after henna paint-on tattoo

- Case report of French pilot with dental pain from a dental fracture (from a tongue piercing) during military operations
- “If these complications do not result in death, they can generate sufficient pain to disturb the vigilance and concentration of pilots and can have a major impact on flight security. For these reasons, tongue piercing is in total contradiction to a professional army and particularly to military pilots and aircrews”
A total of 19% of hairdressers (43% of apprentices) and 6% of participants from the general population had ever had a temporary black tattoo performed at one point

- Survey of 201 young adults with oral piercings
- Of those aware of issues, 8.5% gingival recession, 6.9% chipped teeth
- Gingival recession with 53% titanium, 23% stainless steel, & 9% Teflon
- Chipped teeth with 36% titanium, 43% stainless steel, & 14% Teflon

- 23 year old male with lower back surgery who required prone positioning for the surgical procedure
- Found to have nipple rings prior to starting anesthesia which anesthesia/surgery wished to be removed due to concerns about pressure induced injury associated with prone positioning
- “The anesthesiologists, surgeons, and operating room personnel did not know how to remove the nipple rings, and the assistance of a preoperative nurse with knowledge of the appropriate technique was recruited”
- Suggest adding removal of body jewelry to pre-operative consent

- Case report of 39 y/o female with tattoo around a back lipoma
- Tattoo preserved during successful lipoma removal

- “Risk behavior related to sex, tattooing or piercing was common among current as well as former injection drug users.”

- “Further studies are necessary to evaluate whether repeated treatments with picoseconds versus nanosecond domain modalities might yield superior tattoo pigment clearance with a comparable safety profile”

- 10-year, single center data review of tattoo removal issues, including reasons behind the typically low success rates for total tattoo clearance
- Study of self-reported oral complications of 130 patients with lip and 80 patients with tongue piercings
- 87% of patients self reported early piercing complications
- Significant cofactors for early complications were oral hygiene behavior, gender, and the person who performed the piercing
- Significant cofactors for late complications were recurrent infections and gingival recession
- “Owing to the high prevalence of late complications, especially after median lip piercing, persons with oral piercing should attend regular dental checks and receive professional advice on tooth cleaning and oral hygiene.”

- Case report of young woman with breast abscess 5-months post-piercing
- Not stated in abstract where pierced, i.e. self vs. kiosk vs. professional piercer
- “With the increasing prevalence of body piercing, it is important to document and report infections which may be discovered many months following piercing. Carcinoma can mimic breast abscess and should be included in the differential diagnosis.”

- “The introduction of quality-switched lasers has provided an effective removal method that is increasingly being exploited by tattoo studios themselves. Dermatologists, however, are frequently confronted with complications and side effects of tattoo removals that were performed by non-professionals.”
- Study assessed for potential risks and pitfalls of laser tattoo removal when performed by medical laymen – 1) rare, but potentially severe allergic or toxic effects of decomposition products of the tattoo pigments 2) bodily harm caused by out-of-specification usage of the laser devices 3) malignant disease that is obscured within the area of a tattoo and requires meticulous dermatological diagnosis 4) insufficient pre-operative consultation of patients about the risks, side effects and realistic expectations on the therapeutic outcome
- “We came to a conclusion that tattoo laser removal by medical laymen is unacceptable from the point of view of patient safety and the laws need to ban this practice swiftly.”

- Tattoo “blow-out” is when tattoo pigments spread outside the border of the tattoo
- 36 y/o female with blow-out of foot tattoo – successfully treated with laser
- “… the use of Q-switched lasers may very rarely result in the formation of large bulla. While very disconcerting to patients, these lesions are easily managed and, with proper care, heal quickly with no long-term consequences.”
- Case report of 3 patients who had bullae post-laser removal of tattoo ink and all were treated successfully

- Case review of pink tattoo ink that initially darkened paradoxically but eventually resolved with continued Q-switched laser treatments

- Great summary of complications post-tattooing including infections, hypersensitivity reactions to tattoo pigments, benign and sometimes malignant tumors arising on tattoos
- Patients with a family history of melanoma should not get tattooed
- “Three factors participate in the development of tattoo complications: 1) Tattooing techniques and the professionals who perform tattooing (regulation and education), 2) medical progress (MRI/PET scans, patients who “forget” to tell medical professionals about their tattoo before being treated), 3) society… only time will tell.”

- Great summary of body art and pregnancy medical issues (very pro-non-removal)
- Local infections at abdominal microdermal, navel (stretch scar)/nipple (breast feeding is ok)/genital piercings (“removal should always be questioned”), tongue jewelry & anesthesia (remove before any surgical procedure), tattoos and epidural anesthesia (disputes the “you can’t have an epidural through a tattoo myth”)
- “Body art is increasingly encountered in our daily practice. In most cases, tattoos and piercings will not interfere with pregnancy.”

- First two case reports of medical issues associated with microdernals
- Case 1: 21 y/o pregnant female with 2 abdominal microdernals – 1 rejected @ 28 weeks & the other removed per OB physician at OB physician’s suggestion
- Case 2: 23 y/o pregnant female with 1 abdominal microdernal – spontaneous rejection and local infection at 20 weeks
- Discourages abdominal microdernals in those who are pregnant or planning to become pregnant
- Tested several open bottles of tattoo ink in a shop and all were still sterile
- Suggests that infections occur not from the ink, but from a later step in the process, i.e. tools, skin prep, or after care

- Internet survey of tattooed people in German-speaking countries
- “After tattooing, the people described skin problems (67%) or systemic reactions (6%). Four weeks after tattooing, 6% reported persistent health problems due to the tattoo.”

- 151 people, ages 18-60, requesting tattoo removal
- Reasons for removal: aesthetic, social, employment, family/partner pressure, change of lifestyle/partner, incompatibility with present attitudes and values

- Random telephone survey of 506 people in Hong Kong
- 37% recognized that tattooing or body piercing were possible risk factors for Hepatitis B transmission

- High risk populations for dental trauma include… patients with oral (tongue) and/or lip piercing
- New guidelines for the management of traumatic dental injuries

- Survey of 42 people with tattoos
- Never felt discriminated against, no need to hide tattoos, not viewed as a form of cultural resistance, would not have gotten them if they believed it would cause them professional problems, were not drunk when they were tattooed, & believed that tattooing is a form of expression and aesthetic sense
- “There has been an important shift in the meaning of the practice to tattooed individuals.”
- Oral mucosa smears of 15 young patients with oral piercings
- “The pathological findings in smears correlated with the adverse effects of oral piercing… A strict regulation of piercing is warranted.”

- Case report of two cases where persistent nodules developed at piercing sites with gold jewelry

- Analysis of 232 patients with Hepatitis C at their clinic
- Tattooing and piercing were a potential route of infection in 4% of cases

- 60 patients with tongue piercings compared with 120 patients without tongue piercings
- Age range 13 to 28
- Patients with tongue piercings had an 11 times greater chance of gingival recession

- Analysis of 19 commercially available black tattoo inks
- Many were carcinogenic, especially when exposed to solar radiation

- Study of 445 men with genital piercings as to whether they had penile tattoos and/or inserted other materials such as fluids and foreign objects into their penis and urethra
- 24% responded saying yes to one or both of the above questions

- Survey of 236 college students
- Number of tattoos and sexual partners correlated significantly
- Men and women with piercings were more likely to have had premarital intercourse
- No significant correlations between body modifications and religious variables
- Smoking, tattooing, and diet were not associated with the occurrence of hand eczema

- Case report of 52 y/o male who failed traditional medical and surgical therapies for a post-ear piercing keloid, but was successfully treated with electrochemotherapy

- Case report of 11-year old girl with allergic contact dermatitis to black henna tattoo

- 16 y/o Chinese girl with phaeohyphomycosis caused by Venoraea botryosa 2-months after ear piercing
- First case reported of V. Botryosa infection associated with cosmetic procedure which suggests that skin piercing could precipitate V. botryosa… or other opportunistic fungal infections

- 16 y/o female with history of diabetes and hypertension
- Tongue piercing at shopping mall 4-days prior to massive hemorrhage requiring local surgical intervention, intubation, and admission to Pediatric ICU
- Thought to be as a result of diabetes induced impaired wound healing and metal piercing eroding into the the artery of the tongue
- “Health care providers and patients should be made aware of immediate concerns related to piercings (eg bleeding and infection), but should also be made aware of the potential for significant, even life-threatening, delayed complications from the piercing.”

- Review of nickel sensitivity and its association with body piercing and other environmental factors
- “… piercing… is a potential exposure for sensitization. Nickel is the most common sensitizer in almost all studies pertaining to pediatric contact dermatitis…”

- Survey of 54 anesthesiologists about lumbar tattoos and epidural anesthesia
- 57% would place an epidural through the tattoo & 39% would not

- Overview of different options when a tattoo is at risk because of a surgical intervention
- “By realizing that a tattoo can be of great value to a patient and by using surgical skills to preserve the tattoo as much as possible, it become possible to increase patient satisfaction in these difficult cases.”

- 23 patients with earlobe keloids treated with this protocol
- 25 & 27% recurrence rates for low and high-risk groups

- Random survey of 440 people – 20% had piercings (beyond earlobes) & 15% had tattoos

- “All subjects rated the nurse with the most amount of body art more caring than patients and faculty. Students rated the most amount of body art more caring than patients and faculty… To be perceived as skilled an knowledgeable, nurses should wear a solid colored uniform with limited visible body art. »
- Case report of sarcoidal granulomatous reaction to old cosmetic tattoos after intense pulsed light treatment for facial skin rejuvenation
- Hypothesized that the patient had an underlying immune dysfunction as predisposing factor
- Suggests that intense pulsed light therapy be used cautiously in patients with tattoos, especially when a history of autoimmune disease is present

- Immunization against Hepatitis B virus (HBV) is recommended for all sentenced prisoners and all new entrants to prison in the UK
- 27 y/o male developed Hepatitis B - His cell mate was Hepatitis B positive was found with a home-made tattoo gun in their cell
- « In the absence of other clearly identifiable risk behaviours, tattooing was deemed to be a possible route of HBV transmission. »

- Patient who developed multiple, eruptive keratoacanthomas in the red ink portions of a tattoo

- « The available evidence does not identify any specific risks associated with epidural catheter placement through low back tattoos, although tissue coring with tissue transport to deeper sites has been confirmed... We suggest avoidance of piercing tattoos when performing epidural punctures until there is sound evidence of short-term and long-term safety. »

- « Today, more than 10% of the Western population has at least 1 tattoo, with prevalence of up to ¼ in the cohort younger than 30 years of age. »
- Overview of laser removal strategies

- 4 patients who had permanent make-up (PMU) to lips tested and found to have allergic reactions to red ink
- “In light of the severe and often therapy-resistant skin reactions, we strongly recommend the regulation and control of the substances used in PMU colorants.”
- 26 y/o male who ordered « chemical tattoo removal » product off of the internet and required skin grafts due to deep burns

- Tattoo reaction only on blue pigment of 6-month old red and blue tattoo
- Sarcoidal granuloma on the tattoo, but no systemic sarcoidosis – However, suggests close surveillance for the development of systemic sarcoidosis

- Study of 240 women with genital piercings
- “Genital piercings were deliberate actions, sought for personal and sexual expression”
- “Women with genital piercings treat piercings as normal, meaningful parts of their lives which produce sexual enhancement and expression”
- “They continue to seek information about genital piercing care from non-health providers”
- “Nurse practitioners can become effective and resourceful advocates in three specific areas of care: 1) responsiveness to women with genital piercings 2) collaborative decision making for the removal of jewelry 3) promotion of applicable patient education”