

Experiences and Influences of Women With Cosmetic Tattooing

Jana C. Saunders
Myrna L. Armstrong

Cosmetic tattooing (permanent makeup of eyebrows, eyeliner, or lipliner) procedures are flourishing among women worldwide. Recurrent themes provide knowledge and understanding so dermatology nurses can aid in their procedural decision making.

We all harbor internal ideas of our appearance and respond to the demand of seeing and being seen, yet to get a tattoo for these internal ideas is an uncommon action for most women. But we also live in a world of spontaneous responses so the consideration of using tattooing to obtain permanent make-up of eyebrows, eyeliner, or lip liner may not be so far fetched. Check out the advertising pages of the telephone book to see how flourishing the business of permanent cosmetics is in your locale; they may also be listed under tattooing or permanent make-up. In San Antonio, Texas, there are almost five pages of advertisements. In the authors' city of 200,000, there are three people who advertise the procedures, seven who are registered according to state regulations, and "rumor has it that" there is a 3-month waiting list for interested patrons. While the concept is not new, Geronemus (1996) attributes the increase of cosmetic tattooing to the new equipment and pigments used for the placement techniques.

Cosmetic tattooing is practiced worldwide and in the United States; however, no federal legislation regulating tattooing exists. Both professionals and amateurs are performing the cosmetic tattooing procedures (Tresukosol, Ophaswongse, & Kullavanijaya, 1997). While most have taken some additional education to learn how to apply permanent make-up, there is no standardization of either education or instructor qualifications for the

course. The credentials of many who are performing this procedure in the United States are cosmetologists; others are just interested people who have taken a course. Some are even registered nurses and physicians. For any micropigmentation personnel, a board certification, complete with an examination, is available from a physician-run agency called the American Academy of Micropigmentation. Not known are the additional people who might be working out of their homes and performing these cosmetic procedures, responding only to word-of-mouth referrals. In Texas, any personnel performing permanent cosmetics are required to register with the State Health Department, pay a \$450 fee, and ascribe to the general body tattooing regulations. Currently, over half of the 900 registered studios in the state providing tattoos are associated with permanent cosmetics (J. Gower, personal communication, January 2, 2004).

Medical terms attached to the procedures include *intra-dermal pigmentation*, *micropigmentation*, and *dermagraphics*. Most of the medical literature about cosmetic tattooing is focused on eyeliner and brow enhancement under the terms of blepharopigmentation and blepharoplasty. Little information is present about cosmetic lip tattooing, although the procedure is just as common. The purpose of this article is to investigate why women make decisions to obtain permanent cosmetics, what influences

Jana C. Saunders, PhD, RN, CS, is an Associate Professor, Texas Tech University, Health Sciences Center School of Nursing, Lubbock, TX.

Myrna L. Armstrong, EdD, RN, FAAN, is a Professor, Texas Tech University, Health Sciences Center School of Nursing, Lubbock, TX.

Acknowledgment: The Texas Tech University Health Sciences Center School of Nursing Research and Practices Committee is gratefully acknowledged for their partial support of this study.

their decisions, and their prior experience with tattoos. Additionally, no nursing literature has been published about this phenomenon; thus, women's stories about the influences and experiences of cosmetic tattooing (lipliners, eyeliners, and eyebrows) will be examined to initially document emerging themes of women who chose these popular procedures. This information is helpful as women seek information from dermatology nurses so they can make decisions regarding cosmetic tattooing procedures.

Background Literature

Historical perspective. Tattooing for beauty has been present in almost every culture for a very long time. Egyptian and Assyrian women painted their lips with plant materials thousands of years ago. Early cosmetic tattooing consisted of dots and lines on the chins of Polynesian women. Lip tattooing was reportedly done by Eskimo women. Later, during war times, these indelible beauty practices extended to other areas such as tan make-up and a tattooed vertical seam line to satisfy those who could not afford silk and nylon stockings. In the medical literature, eyelid tattooing was described as early as 1964 by an ophthalmic plastic surgeon, using a 25 gauge needle, to apply pigment along the eye border to simulate missing eyelashes (Paupa, Jakobiec, & Krieb, 1986). Yet, most attribute Angres (1984a; 1984b), an ophthalmologist from Las Vegas, as the pioneer of blepharopigmentation in the United States. He broke the news about this new cosmetic procedure to the medical community in two different 1984 medical journals (using the same text and illustrations). His reasons for introducing eyeliner implants were to respond to women's historical desire to enhance their eyes, their suffering of emotional well-being if they could not apply their eye make-up, as well as acknowledgment of the booming mascara market. The following year, he described "Natural Brows" and the "Angres Permalid-

Liner" procedures as "one of the fastest growing procedures in ophthalmic practice" and he "was now teaching cosmetic augmentation...to a growing number of physicians" (Angres, 1984b, p. 605).

Not surprising, next came editorials from other physicians (Margo, 1985; Morris, 1986) wondering about the viability of eyelid tattooing. Anderson (1985) asked, "What would stimulate a large group of physicians, who have never shown any interest in cosmetic surgery, and a public, which has rejected tattooing on other parts of the body, to be swept away by the concept of eyelid tattooing?" (p. 1469). Alpar (1986) spoke of concern for "minicourses in the exhibit hall during scientific lectures...and the physician purchase of a tattoo machine for \$7,000" (p. 637). Other articles continued to appear, including additional details of the procedure (Paupa, 1987), histological microanalysis, and electron microscopic examination of the eyeliner pigment (Hurwitz, Brownstein, & Mishkin, 1988; Paupa et al., 1986; Simons, Payne, & Heyde, 1988; Tse, Folberg, & Moore, 1985).

Overall, while tattooing pigment is approved for topical use, it is not FDA approved for invasive use, nor are the pigment ingredients standardized (Armstrong & Kelly, 2001). Both in 1995 and 2000, the Food Safety and Applied Nutrition Center of the U.S. Food and Drug Administration (FDA) published cautions about permanent make-up and emphasized that state and local agencies have the direct jurisdiction over the practice of tattooing by salon technicians. Recently, the FDA decided to investigate side effects with certain brands of permanent make-up ink used to perform cosmetic-like tattooing of lips and eyes ("FDA Warns," 2004). Currently 33 states either have separate regulations or use their existing tattooing regulations to control the procedure (Armstrong, in press). Additionally, some states such as Arizona have specific cosmetic artists associations. Two cosmetic tattooing associations exist

and their mission is to promote education for customers and artists, as well as maintain legislative involvement.

Permanent cosmetic procedure. The actual technique of permanent cosmetics is similar to the usual form of tattooing so that pigment can be inserted into the skin multiple times a minute. Attaining the proper depth of the pigment and length of the needle is a delicate balance. Pigment not placed deep enough can cause the pigment to shed "as the epidermis normally renews itself" (Kreter, Sall, & Keates, 1985; Paupa, 1987). In contrast, excessive depth of the needles is thought to cause eyelash loss or eyelid margin necrosis (Goldberg & Shorr, 1989). Permanent eyeliner and eyebrow procedures are done to simulate fullness and thickness of either the lashes or brows, thus enhancing the patient's "natural" cosmetic appearance. Liplining or micropigmentation (Engasser, 2000) can either define the lip margins or color the entire border. With the many types of pigment (tattoo or vegetable type) that are used for permanent cosmetics, the intensity of the tattoo pigment can fade with time so frequent "redos" or re-livens are common.

Documented permanent cosmetic risks. In the early medical literature of cosmetic tattooing, partial loss of eyelashes (Tse et al., 1985) and superficial infections (Wilkes, 1986) were reported. Three cases of hepatitis C transmission were reported in China due to the use of nondisposable needles and poor sanitation practices (Sun, Zhang, Geng, & Xi, 1996). Pigment from international sources also seems to cause more problems (Peters, Conn, & Cote, 1999; Tresukosol et al., 1997), such as that reported in a recent article from France discussing a delayed hypersensitive granulomatous reaction induced from aluminum-silicate (Schwarze, Giordano-Labadie, Loche, Gorguet, & Bazex, 2000).

The most common and major complications cited in the U.S. medical literature from cosmetic tattooing are imperfect application of

the pigment dots, pigment migration, and procedural dissatisfaction among recipients (U.S. Food & Drug Administration, 2000). Dermal maceration or fanning may also occur, where pigment spreads into the surrounding tissues of the eye and lips (Engasser, 2000; Patipa, 1987). Additionally, lip tattooing can trigger an episode of recurrent herpes labialis (Engasser, 2000). To overcome and correct these problems, some cosmetologists have close associations with dermatologists or plastic surgeons for any procedural concerns. Over 50 adverse reactions have been reported recently by the FDA from certain shades of a national distributed brand of ink used for cosmetic tattooing including blistering, swelling, cracking, and peeling skin around the lips and eyes. This has caused patients difficulty in eating and talking, as well as serious disfigurement ("FDA Warns," 2004).

For those with complications, several techniques are available for removing permanent eyeliner such as "surgical excision, bleaching the pigment by applying alcohol with the tattoo needle, applying a lighter pigment over the existing eyeliner, and scraping" (Putterman & Migliori, 1988, p. 1034). Other side effects of cosmetic tattoo pigment removal are scarring, alopecia, and prolonged postoperative morbidity. Tretinoin has also been suggested to aid in pigment removal (Chiang, Barsky, & Bronson, 1999). Most often the Q-switched and pulsed lasers seem to be the treatment and equipment of choice for many of the complications (Geronemus, 1996; Tannenbaum, Karas, & McCord, 1988; Watts, Downes, Colling, & Walker, 1992). Additionally, some irreversible cosmetic tattoo darkening has been reported when trying to remove cosmetic tattooing around the lips and eyes so a test-site exposure is suggested prior to laser treatment (Anderson, Geronemus, Kilmer, Farinelli, & Fitzpatrick, 1993; Engasser, 2000; Fitzpatrick & Lupton, 2000).

Permanent cosmetics can also produce significant artifacts on radi-

ologic procedures (MRIs) depending on the amount of metallic oxides in the pigment. Additionally, the radio-frequency energy from the MRI can cause a delayed swelling and puffiness to the tattooed area because excessive heat is produced (Carr, 1999; Jackson & Acker, 1987; Lund, Wirtschafter, Nelson, & Williams, 1986; Weiss, Saint-Louis, Haik, McCord, & Taveras, 1989). To combat some of these problems, the completion of a medical questionnaire as a useful screening technique before all radiologic diagnostic procedures is recommended.

Motivation for body tattooing.

Over the last 15 years, risks, decision making, and influences for general body tattooing in career women and college students have been examined (Armstrong, 1991; Armstrong, Owen, Roberts, & Koch, 2002). Two types of risks related to tattooing were described by Sanders (1985) and applied in Armstrong's early work (1991). This included "purchase risk – elements such as inexperience, expense, pain, physical exposure, and dissatisfaction" as well as "possession risk – the potential discord the tattooee may experience from the intended meaning of the tattoo, the response of others who are close, and the reaction that can occur in conventional social circles when the tattoo is noticed" (Armstrong, 1991; Sanders, 1985).

Friends, identity, and image were identified as the major influences for tattooing (Armstrong et al., 2002). Friends were important from two perspectives. The first perspective was a "contagion effect where one member of a group obtains a tattoo and others follow," not because of peer pressure but because seeing the tattoo on an individual can "lessen the constraint of others who have been considering the procedure also" (p. 216). The second was that friends (whether tattooed and nontattooed) seem to provide significant psychosocial support for the tattoos, whereas the family influence was limited. Tattoos have also assisted with their

self-identity by "allowing them to exert more of their persona" and making them feel "special, unique, and good." According to Gibbons and Gerrard (1995), image can be important because people seem to take risks, regardless of the behavior (in this case tattooing), as an attempt to acquire the image they associate with the behavior. Once tattooed, many recipients express a desire to repeat the procedure while others (15%-25%) say the first tattoo is enough (Armstrong et al., 2002). Could these same findings be present in other forms of tattooing?

Methodology

The emphasis in this pilot study was the experience of the women who had received a cosmetic tattooing procedure. A human science approach was utilized. Hermeneutical phenomenology (Benner, 1994; Heidegger, 1927/1962) was considered an appropriate approach to examine the lived experience of a particular phenomenon within its context – the experiences and influences of women with cosmetic tattoos. The focus of this approach is the perception of the individual living the experience and the exploration of common meanings that may exist among others experiencing the same phenomenon. Phenomenology is a human science that focuses on "the person as a unique being and stresses the importance of the individual as one who is actively and intentionally seeking meaning in the midst of his or her contextual, social, cultural lived world" (Kimble, 1990, p. 115). Hermeneutics, meaning interpretation, is the way this active seeking becomes revealed (Heidegger, 1927/1962) with the *inside out* perspective. This approach assumes no sole truth and welcomes new perspectives and possibilities. It is within this human science framework that the way women who have undergone cosmetic tattooing live their everyday lives can be heard and understood.

Sample. A total of 10 participants were obtained by network or snowball sampling, which took

advantage of social networks and the fact that friends tended to have characteristics in common. Criteria for the participants included: (a) over the age of 18, (b) female, and (c) who had received at least one of the cosmetic tattooing procedures (eyeliner, lipliner, or eyebrows) for at least 6 months. The participants ranged in age from 23 to 72 years. Seven were currently employed, one was a housewife, and two were retired. All of the participants were married. They lived in a predominantly conservative political and religious community of a rural part of the southwest area of the United States.

Data collection. Prior to each interview the researcher reviewed the purpose of the study and answered any questions the women may have had. The strategy of data gathering was textual information arising from audiotaped individual interviews, which lasted approximately 30 to 45 minutes each. Each participant was interviewed face-to-face and asked the following five questions: (a) Tell me why you chose to have the procedure(s) done? (b) What would you tell other women about the procedure(s)? (c) What factor(s) influenced you to have the procedure(s) done? (d) What has this experience done for you? (e) How would you feel about having the procedure(s) done again?

Data analysis. Data were analyzed according to the hermeneutical method prescribed by Diekelmann, Allen, and Tanner (1989). Each researcher independently generated a list of categories, and then both lists were compared and contrasted to one another. Although not identical, the two lists of categories were very similar. These lists were discussed by both researchers and through a process of abstraction and clarification; themes were identified and mutually agreed upon. The data analysis included multiple levels and lenses of interpretation to detect inconsistencies, contradictions, and researcher bias (Baptiste, 1995; Diekelmann, 1992). As used in this study, a

theme was defined as an abstract entity that brings meaning and identity to a recurrent experience and its variant manifestations. Methodological rigor proposed by Hall and Stevens (1991) was used throughout the data gathering and interpretation process. This rigor adheres to the philosophical underpinnings of interpretive phenomenology in that investigation of experiences and stories must be evaluated in such a way as to give priority to a rigor that fits the contextualized lived story of the individual adequately.

Findings

The following five themes exploring the influences and experiences of women with cosmetic tattooing emerged from the five questions in the study: Consistent personal "best" appearance in less time, positive experience with the procedure(s), admiring other women and friends who had the procedure(s) done, confidence in personal appearance, and unanimous decision to have the procedure(s) done again. These recurrent themes were woven throughout the interviews of the women with cosmetic tattooing. In the presentation of these findings, use of verbatim statements in the voices of the women most clearly captures the essence of their experiences. This thematic analysis served to integrate these findings into our understanding of the influences and experience of women living with cosmetic tattoos.

Tell me why you chose to have the procedure(s) done? "Consistent personal 'best' appearance in less time" emerged as the most frequently occurring theme in response to this question. Women described the desire to improve their appearance, look their best at all times, change "flaws" in their personal appearance, and decrease the amount of time they spent in applying make-up. Several comments represent the pervasiveness of this theme.

"I think we (women) always want to look our best, and when you don't have make-up

on, you don't feel confident."

- "I wanted to be able to have make-up on all the time and not have to mess with it, so it really does save a lot of time in the morning."
- "I wanted more definition to my eyebrows. I've never had pretty eyebrows."
- "I didn't have any color so I wanted permanent eyeliner and eyebrows."
- "I didn't like looking old where I had to and now I don't have to put make-up on all the time."
- "You wake up with make-up on."
- "Do something for yourself. Every woman wants to look the best she can."

What would you tell other women about the procedure(s)? Women described their "positive experience with the procedure(s)" as the most important information to convey to other women. Interestingly, the utilization of good consumer skills was evident as women discussed how they had "researched" the procedure(s) prior to having anything done. They felt that this research had contributed to the overall positive experience of their cosmetic tattooing. Some of the women described "pain" as being important to tell other women about; however, this "pain" appeared to be very individualized ranging from "wasn't painful" to "really painful." Despite reports of "pain," these women reported that overwhelmingly the procedure was "worth the pain." Thus, the positive end result was a consistent theme echoed by these women.

- "I tell women it's absolutely wonderful, and they should do it. Older people want to look nice too."
- "I would encourage them even though it is going to hurt big time. But it was worth it to me. I love it."
- "I had a positive experience. It wasn't painful."
- "It's a little bit uncomfortable, but then you don't have to wear makeup anymore."
- "Be prepared that it does hurt,

but it's very quick. Pay attention to the sterile technique. I watched everything that they prepared before I laid down to do it."

- "Go to someone that you know is a reputable person...you've either seen their work or you've talked to someone that's had it done. Plan ahead. Have a good understanding before you have it done."
- "I would tell any woman that if she wants to have it done...have it done."
- "It just makes your life nicer."

What factor(s) influenced you to have the procedure(s) done? The common theme that was identified with this question was "admiring other women and friends who had the procedure(s) done." This finding is similar to what previous body art research with career-oriented women (Armstrong, 1991) have referred to as the "contagion effect" whereby friends influence their decision to have a tattoo, and "risk-reduction strategies" (Sanders, 1985) whereby previous experience and contact with tattooed people, especially female friends, influence their decision to have a tattoo. Women frequently reported the positive influence that other women and friends had on their decision to have cosmetic tattooing.

- "A friend had it done and she just loved it."
- "My friends just love it. They are natural looking all the time. So that was even more influence for me to get it done."
- "My friend looked very pretty...like an inborn beauty. She was very pleased."
- "A close friend of mine had her eyes done and she looked gorgeous."
- "I knew a lady that had it done and I admired hers. I thought about it for awhile and I decided I wanted to do it."
- "I was so impressed with how beautiful her lips looked, how perfect they looked all the time, and the fact that she didn't have to mess with them. So that's what opened the door for me to

want to get mine done."

- "Her eyes really did look nice. So that's why I decided to do it."

What has this experience done for you? The importance of "confidence in personal appearance" was a recurring theme. Self-confidence was identified by the women as an extremely important component of their daily personal appearances. They expressed how nice it was not to continually worry about how they looked because now they could be assured that they looked good all the time. In addition, their confidence was bolstered when they received compliments on how nice they looked. Women described the enormous benefits of confidence in personal appearance.

- "My eyebrows look good. I get a lot of compliments on them."
- "It gives me confidence knowing that my make-up is still there and I don't look like a washed out cat."
- "I like knowing that my make-up looks the same way every time. And it takes a lot of time out of my morning."
- "It has given me more confidence to where I don't have to worry about what I look like. And I have the convenience of just being able to get up and get ready very quickly."
- "It has increased my self-esteem. I wake up looking good."
- "I've gotten more of a feeling of self-confidence in the way I look. It makes me look better all the time and feel better about myself."
- "It gave me a lot more confidence. I feel brave."

How would you feel about having the procedure(s) done again? The theme that emerged in response to the final question was the overwhelming desire to have the procedure(s) done again. Women expressed satisfaction with their actual procedure(s) as well as with the positive benefits that resulted from an improved personal appearance and self-confidence. All ten participants reported that they

would have the cosmetic tattoo procedure done again.

- "I think it's a good deal."
- "I wouldn't hesitate to do it again."
- "I'm extremely pleased."
- "Yes, yes...it is wonderful."
- "I would definitely go back and do it again."
- "I think it's great."
- "I would have no problem with doing it again. I'm not hesitant about it at all. I recommend it to lots and lots of ladies."
- "I'm reluctant, but I think I will. What is it about women that pain doesn't seem to be a deterrent?"

Discussion

This thematic analysis demonstrates the importance of understanding the experiences and influences of women who have cosmetic tattooing so that the dermatology nurse can assist other women with their decision making. A consistent personal "best" appearance in less time was the dominant theme in the analysis of the qualitative data. This theme clearly illustrated the way in which women talked about and defined the experience of cosmetic tattooing. The expression of this personal "best" appearance seemed to bring meaning and validation to their lives as women. Furthermore, this consistent personal "best" appearance theme was closely interwoven with the other recurrent themes: positive experience with the procedure(s), admiring other women and friends that had the procedure(s) done, confidence in personal appearance, and the overwhelming desire to have the procedure(s) done again. The five pervasive themes were defining points and representations of the most important personal appearance concerns in the lives of these women.

Woven throughout the responses of the women was the evidence of the importance of female friends, identity, and image. It was indeed these significant people in the lives of the women who provided the influence and emotional support for

the cosmetic tattooing procedures. Family tended to lend support but didn't seem to be a significant contribution. The sharing of their thoughts and feelings in a supportive environment of friends was frequently expressed as being important to them. While the "purchase/possession risk" could have been a problem, these women seemed to take deliberate steps to eliminate those concerns.

The experiences and influences of these women have implications for nursing practice because they reveal the current trends, concerns, and reasons for cosmetic tattooing. This research illustrates the importance for nurses to understand the needs and feelings of women who choose to have these procedures done. Nurses will increasingly come into contact with women who may want or have already had cosmetic tattooing done; therefore, it is important for nurses not only to be knowledgeable about the procedures, develop applicable client education about the procedure, but also to understand the needs and feelings of the women who choose to have these procedures done. While there still is some negative connotation about these procedures because they are "tattoos," clearly, cosmetic tattooing appears to have provided this group of women an opportunity to display their best personal appearance and increase their self-confidence. As human beings are naturally dependent on others to supply them with reflected appraisals of their own intrinsic and extrinsic values, any real or perceived threat to a person's self-image could result in a decrease in self-esteem or self-confidence. Thus, women who are provided with positive appraisals from others regarding their personal appearance would receive the nurturance and support that may help to promote a positive sense of well-being and self-confidence. With the overwhelmingly positive expression of cosmetic tattooing in the lives of these women, nurses should be aware that these procedures remain a viable option and choice for many patients. ■

References

- Alpar, J.J. (1986). Eyelid tattooing: Is it here to stay? *Archives of Ophthalmology*, 104(5), 637.
- Anderson, R.L. (1985). Eyelid tattooing: A sign of the times. *Archives of Ophthalmology*, 103, 1469-1471.
- Anderson, R.R., Geronemus, R., Kilmer, S.L., Farinelli, W., & Fitzpatrick, R.E. (1993). Cosmetic tattoo ink darkening: A complication of Q-Switched and pulsed-laser treatment. *Archives in Dermatology*, 129, 1010-1014.
- Angres, G.G. (1984a). Angres permalid-liner method: A new surgical procedure. *Annals of Ophthalmology*, 16(2), 145-148.
- Angres, G.G. (1984b). Eye-liner implants: A new cosmetic procedure. *Plastic and Reconstructive Surgery*, 73(5), 833-836.
- Armstrong, M.L. (1991). Career-oriented women with tattoos. *Image: Journal of Nursing Scholarship*, 23(4), 215-220.
- Armstrong, M.L. In press. Tattooing, body piercing, and permanent cosmetic state regulations: Do they provide public safety? *Journal of Environmental Health*.
- Armstrong, M.L., & Kelly, L. (2001). Tattooing, body piercing, and branding are on the rise: Perspectives for school nurses. *Journal of School Nursing*, 17(1), 12-23.
- Armstrong, M.L., Owen, D.C., Roberts A.E., & Koch, J.R. (2002). College students and tattoos: Influence of image, identity, family, and friends. *Journal of Psychosocial Nursing*, 40(10), 21-29.
- Baptiste, J. (1995). *Race and attrition in baccalaureate nursing programs: A hermeneutic inquiry*. Unpublished doctoral dissertation. Garden City, NY: Adelphi University.
- Benner, P. (Ed.). (1994). *Interpretive phenomenology: Embodiment, caring, and ethics in health and illness*. Thousand Oaks, CA: Sage.
- Carr, J.J. (1999). Questions and answers: Re MR imaging with tattooed eyeliner. *American Journal of Radiology*, 165, 1546-1547.
- Chiang, J.K., Barsky, S., & Bronson, D.M. (1999). Tretinoin in the removal of eyeliner tattoo. *Journal of the American Academy of Dermatology*, 40(6), 101-102.
- Diekelmann, N. (1992). Learning-as-testing: A Heideggerian hermeneutical analysis of the lived experiences of students and teachers in nursing. *Advances in Nursing Science*, 14(3), 72-83.
- Diekelmann, N., Allen, D., & Tanner, C. (1989). *The NLN criteria for appraisal of baccalaureate programs: A critical hermeneutic analysis*. New York: National League for Nursing Press.
- Engasser, P.G. (2000). Lip cosmetics. *Dermatologic Aspects of Cosmetics*, 18(4), 641-649.
- FDA warns of side effects from some permanent makeup ink. 2004, July 5. *Wall Street Journal/Associated Press*.
- Fitzpatrick, R.E., & Lupton, J.R. (2000). Successful treatment of treatment-resistant laser-induced pigment darkening of a cosmetic tattoo. *Laser Surgery*, 27, 358.
- Geronemus, R.G. (1996). Surgical pearl: Q-switched ND:YAG laser removal of eyeliner tattoo. *Journal of the American Academy of Dermatology*, 35(1), 101-102.
- Gibbons, F.N., & Gerrard, M. (1995). Predicting young adults' health risk behavior. *Journal of Personality and Social Psychology*, 69, 505-517.
- Goldberg, R.A., & Shorr, N. (1989). Complications of blepharopigmentation. *Ophthalmic Surgery*, 20(6), 420-423.
- Hall, J., & Stevens, P. (1991). Rigor in feminist research. *Advances in Nursing Science*, 13(3), 16-29.
- Heidegger, M. (1962). *Being and time*. J. Macquarrie & E. Robinson. New York: Harper and Row. (Original work published 1927).
- Hurwitz, J.J., Brownstein, S., & Mishkin, S.K. (1988). Histopathological findings in blepharopigmentation eyelid tattoo. *Canadian Journal of Ophthalmology*, 23(6), 267-269.
- Kimble, M. (1990). Aging and the search for meaning. *Journal of Religious Gerontology*, 7(1), 111-129.
- Kreter, J.K., Sall, K.N., & Keates, R.H. (1985). Potential hazards of blepharopigmentation. *Ophthalmic Surgery*, 16(11), 693-695.
- Jackson, J.G., & Acker, J.D. (1987). Permanent eyeliner and MR Imaging. *American Journal of Radiology*, 149, 1080.
- Lund, G., Wirtschafter, J.D., Nelson, J.D., & Williams, P.A. (1986). Tattooing of eyelids: Magnetic resonance imaging artifacts. *Journal of Ophthalmic Nursing & Technology*, 5(6), 228-230.
- Margo, C.E. (1985). Physicians as tattoo artists. *New England Journal of Medicine*, 313(19), 1234.
- Morris, J.M. (1986). Eyelid tattooing. *Archives of Ophthalmology*, 104, 334-336.
- Patipa, M. (1987). Eyelid tattooing. *Advanced Dermatologic Surgery*, 5(2), 335-348.
- Paupa, M., Jakobiec, F.A., & Kreb, W. (1986). Light and electron microscopic findings with permanent eyeliner. *Ophthalmology*, 95(10), 1361-1365.
- Peters, N.T., Conn, H., & Cote, M.A. (1999). Extensive lower eyelid pigment spread after blepharopigmentation. *Ophthalmic Plastic and Reconstructive Surgery*, 15(6), 445-447.
- Puterman, A.M., & Migliori, M.E. (1988). Elective excision of permanent eyeliner. *Archives of Ophthalmology*, 106, 1034.

continued on page 31

Cosmetic Tattooing

continued from page 28

- Sanders, C.R. (1985). Tattoo consumption, risk and regret in the purchase of socially marginal service. In E. Hirschmann & M.B. Holdbrook (Eds.), *Advances of consumer research (Vol XIII)* (pp. 17-22). Provo, UT: Association of Consumer Research.
- Schwarze, H.P., Giordano-Labadie, F., Loche, F., Gorguet, M.B., & Bazex, J. (2000). Delayed hypersensitivity granulomatous reaction induced by blepharopigmentation with aluminum-silicate. *Journal of the American Academy of Dermatology*, 42, 5 Pt. 2, 888-890.
- Simons, K.B., Payne, C.M., & Heyde, R.R.S. (1988). Blepharopigmentation: Histopathologic observations and X-ray microanalysis. *Ophthalmic Plastic and Reconstructive Surgery*, 4(1), 57-62.
- Sun, D., Zhang, F., Geng, Y., & Xi, D. (1996). Hepatitis C transmission by cosmetic tattooing in women. *The Lancet*, 347(9000), 541.
- Tannenbaum, M., Karas, S., & McCord, C.D. (1988). Laser ablation of blepharopigmentation. *Ophthalmic Plastic and Reconstructive Surgery*, 4(1), 49-56.
- Tresukosol, P., Ophaswongse, S., & Kullavanijaya, P. (1997). Cutaneous reaction to cosmetic lip tattooing. *Contact Dermatitis*, 36(3), 176-77.
- Tse, D. T., Folberg, R., & Moore, K. (1985). Clinicopathologic correlate of a fresh eyelid pigment implantation. *Archives of Ophthalmology*, 103(3), 1515-1517.
- U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition. (2000, November 29). *Tattoos and permanent makeup*. Office of Cosmetics and Colors Fact Sheet. Retrieved January 13, 2003 from <http://vm.cfsan.fda.gov/~dms/cos-204.html>
- Watts, M.T., Downes, R.N., Colling, J.R.O., & Walker, P.J. (1992). The use of Q-Switched Nd: YAG laser for removal of permanent eyeliner tattoo. *Ophthalmic Plastic and Reconstructive Surgery*, 8(4), 292-294.
- Weiss, R.A., Saint-Louis, L.A., Haik, B.G., McCord, C.D., & Taveras, J.L. (1989). Mascara and eyelining tattoos: MRI arifacts. *Annals of Ophthalmology*, 21, 129-131.
- Wilkes, T.D. (1986). The complications of dermal tattooing. *Ophthalmic Plastic Reconstructive Surgery*, 2, 1-6.