



SC FORMAZIONE PERMANENTE
E RAPPORTI CON L'UNIVERSITÀ



WORKSHOP

**06
GIUGNO
2025**

CRPT- PROGRAMMA REGIONALE DI SCREENING

PREVENZIONE **SERENA**

**AGLI ESTREMI DELLO SCREENING
MAMMOGRAFICO**

Elisabetta Adelaide Baglioni

Dirigente Medico SC Chirurgia Plastica U

(Direttore f.f.: Prof.M. Fracalvieri)

ASO Città della Salute e della Scienza di Torino

**Il tatuaggio: tra
arte e rinascita**

RICOSTRUZIONE COMPLESSO AREOLA CAPEZZOLO (NAC)

Ultimo step dell'iter ricostruttivo
 Contribuisce a creare l'effetto volume della mammella ricostruita
 Accettazione della mammella ricostruita da parte delle pazienti
 Recupero dell'immagine corporea alterata
 Simmetria e riduzione dell'evidenza di eventuali imperfezioni tra le due mammelle
 Aumenta la soddisfazione della paziente

Medicina Historica 2023; Vol. 7, Suppl. 1: e2023014

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ORIGINAL ARTICLE: BIOETHICS

The cancer patient and medical dermo-pigmentation: psychological aspects.

Sofia Vachtsenovanos¹, Luca Rubino², Pier Luigi Santi³, Daniele Friedman^{3,4}, Claudio Battaglia²

Italian League for the Fight Against Cancer (LILF), Sanremo, Italy¹; Breast unit ASL1, Imperia, Italy², University of Genova, Italy³; San Martino Hospital, Genova, Italy⁴.

Abstract. This work aims to assess breast cancer treatment's physical and psychological impact on patients undergoing it, particularly regarding emotional and social issues. The focus is on the extent to which reconstructive procedures can alleviate problems the operated patients are facing and on whether the completion of the reconstructive procedure, through the reconstruction, or restructuring of the nipple-areola complex through minimally invasive methods, such as tattooing, i.e. micropigmentation, is an important requirement in order for the patient to forget about the disease, or reduce the impact its memory brings.

Keywords: humanisation, medical tattooing, reconstructive surgery, to care, lived experiences, psychology, evaluation, patient satisfaction

Supportive Care in Cancer (2024) 32:153
<https://doi.org/10.1007/s00520-024-08351-3>

REVIEW

Tattooing to reconstruct Nipple-Areola Complex after oncological breast surgery: a scoping review

Deborah Maselli¹ · Martina Torreggiani² · Tiziana Livieri³ · Gloria Farioli³ · Stefania Lucchi³ · Monica Gubert²

Received: 3 August 2023 / Accepted: 30 January 2024 / Published online: 10 February 2024
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Abstract

Purpose The dermopigmentation of the Nipple-Areola Complex (NAC) is a safe non-surgical reconstruction technique that can restore psychophysical integrity, representing the final step after oncological surgery. This scoping review aims to identify and synthesize the literature focused on medical tattooing for NAC reconstruction in women who underwent breast reconstruction after cancer surgery. Competence and training, outcomes and organizational aspects were assessed as specific outcomes.

Methods The Joanna Briggs Institute (JBI) methodology for scoping reviews was followed. MEDLINE, Embase, Cochrane Library, Clinical Key, Scopus and Cinahl databases were consulted. After title (N=54) and abstract (N=39) screening and full-text review (N=18), articles that met eligibility criteria were analyzed, critically appraised and narratively synthesized.

Results 13 articles were analysed, with full texts (N=11) and only abstract (N=2). The overall quality of the literature (N observational studies=11; N pilot experimental studies=2) is weak. Nurses were the professionals mostly involved (N=6), then medical staff (N=4) and tattoo artists (N=2). The professional training is poorly described in 6 papers. The most frequently assessed outcome was the satisfaction rate (N=8). One study explored aspects of quality of life with a validated questionnaire. The management of these services resulted variable. Nurse-led services were implemented in 2 studies.

Conclusion Despite methodological weaknesses, NAC tattooing research is relevant because it helps women redefine their identity after demolitive cancer treatments. Further research on processes and outcomes is needed.

Keywords Medical tattooing · Women health services · Breast cancer nursing · Oncology · Nipple-Areola complex reconstruction

TATUAGGIO AREOLARE

Art. 2.
(Definizioni)

1. Ai fini della presente legge si intende per:

a) tatuaggio: la colorazione permanente di parti del corpo umano, ottenuta con l'introduzione o la penetrazione intradermica o sottocutanea di pigmenti mediante aghi o altra tecnica, finalizzata a formare disegni, simboli o figure indelebili e permanenti. Sono escluse dal tatuaggio le attività di dermopigmentazione estetica;



Ministero della Salute

<https://www.salute.gov.it/new/it/tema/sicurezza-giocattoli-e-prodotti-libero-consumo/miscele-tatuaggi-e-dermopigmentazione/>

IERI 2005-2015

OGGI 2022-2025

AREOLA

Tatuaggio

Innesto da inguine

Innesto + tatuaggio

Innesto di cute spessa
prelevato in sede areolare controlaterale

Tatuaggio

Tatuaggio 3D

Protesi areolare

CAPEZZOLO

Lembi locali

Decapitazione controlaterale

RICOSTRUZIONE AREOLA (tatuaggio –ambulatoriale)
almeno 30 giorni dopo la ricostruzione del capezzolo

IERI



Tatuaggio



Innesto da Inguine

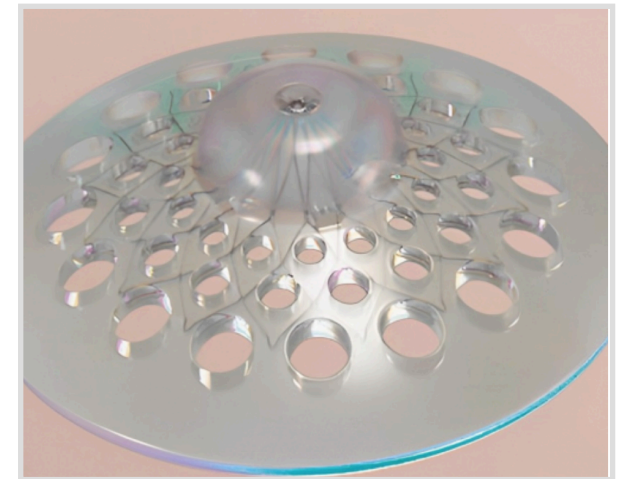


Innesto da areola contro-laterale

OGGI

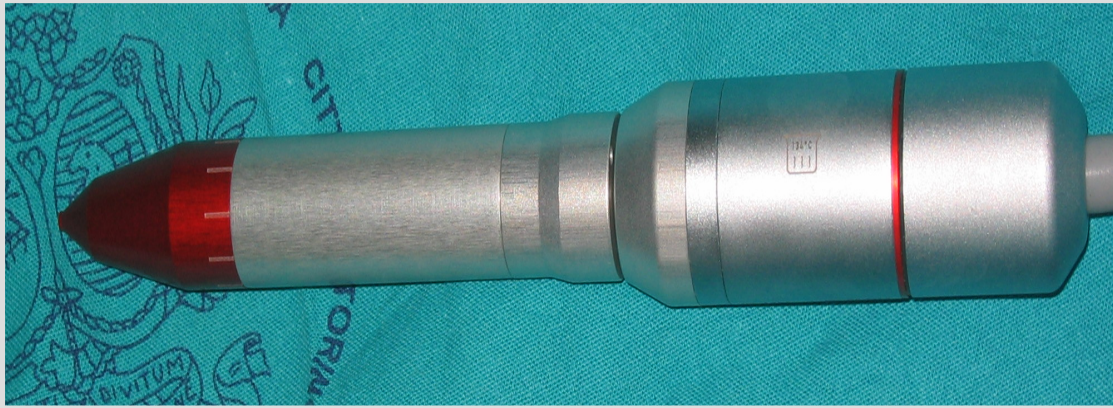


Tatuaggio 3D



Protesi areolare

IERI



Tatuatore con punta a 12 aghi



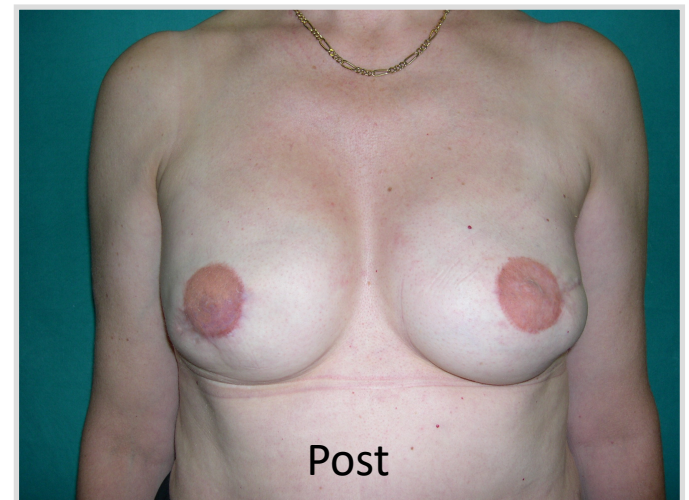
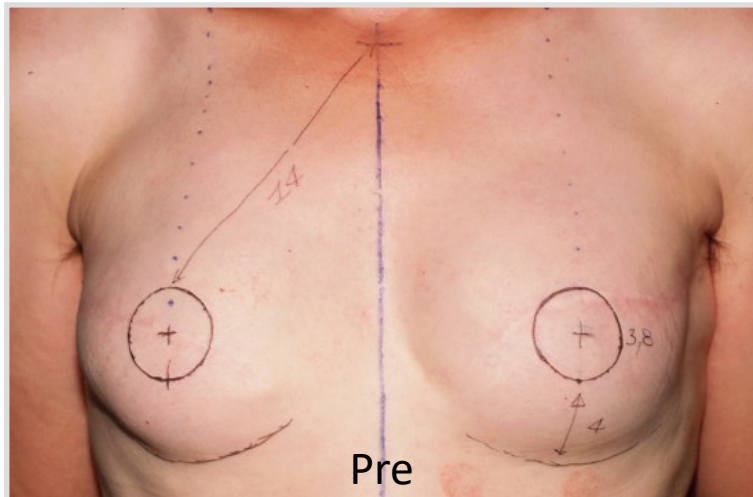
IERI



Tatuaggio bidimensionale



IERI

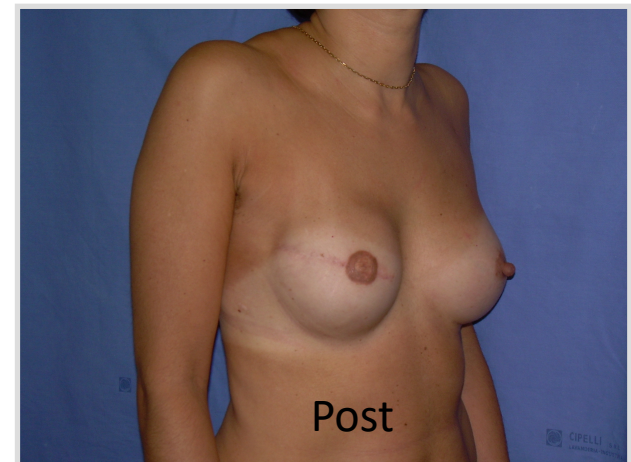
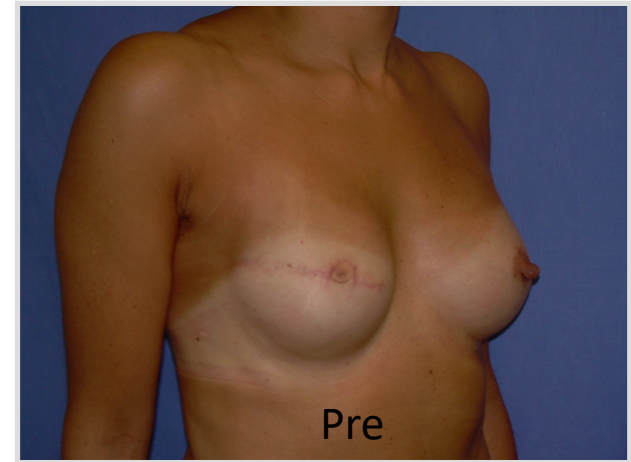
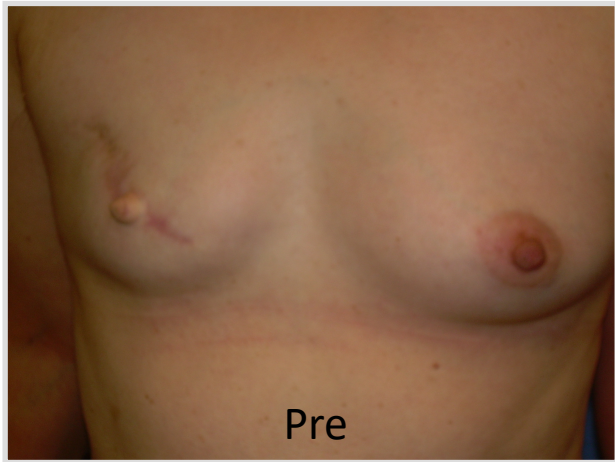


IERI



tatuaggio su IDE da inguine

IERI



TATUAGGIO

SI

NO

Correzione asimmetria di volume della mammella
 Correzione asimmetria di posizione del capezzolo
 Su innesto di cute perché buone rilevatezza
 Bilaterale-> scelto forma e colore
 Cicatrice lineare in sede donatrice
 Areola controlat. Diametro <5 cm
 Areola controlat scura
 Bordi sfumati
 Possibile variazione di forma in funzione della controlat.

Cicatrici estese
 Cute sottile e/o irradiata
 Areola controlat grande: diametro >5 cm
 Areola controlat chiara (eventuale tatuaggio controlat)

COMPLICAZIONI

Alterazione del contorno
 Fading
 Infezione
 Ecchimosi/ematoma

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 DOI: 10.1016/j.actbio.2023.10001
 © March 2023

ORIGINAL ARTICLE

Factors influencing final rendering in areola tattoo reconstruction: a statistical analysis

Irene Laura Lusetti¹, Caterina Marra¹, Lucrezia Pacchioni, Giorgio De Santis
 Department of Plastic and Reconstructive Surgery, Policlinico of Modena, University of Modena and Reggio Emilia, Modena, Italy. *These authors contributed equally to the study and should be accounted as first authors.

Abstract. *Background and aim:* Reconstruction of the nipple-areola complex announces the end of breast reconstruction process, sometimes difficult to live for the patient, and significantly improves the perception of body image. In literature there are no studies addressing the possible influencing factors of the final rendering of areola reconstruction with tattoo. The aim of the present study was to evaluate all the factors which could influence the yield and the final result of the nipple areola complex pigmentation. *Methods:* 97 patients who underwent areolar tattooing between January 2018 and February 2020 were retrospectively reviewed. Breast reconstruction timing and personal history as well as surgical details were recorded. *Results:* Mean age was 52 years old (range 29-71), almost the totality of cases was women including even 2 men (one with Poland syndrome and one post mastectomy). 27 patients needed bilateral tattooing. 22 had history of adjuvant radiotherapy, 16 received neoadjuvant chemotherapy and 4 adjuvant chemotherapy. In the logistic regression analysis, radiotherapy resulted a risk factor for retattooing (p<0.05) while the atypical breast reconstruction resulted a protective factor for retattooing. Neo- and adjuvant chemotherapy were not statistically significant. *Conclusions:* Tissue thickness, sex, reconstructive technique and history of radiotherapy could influence the final result in areola reconstruction with tattoos, and must be taken into account to obtain the best result, knowing when the pigmentation has to be repeated. (www.actabiomedica.it)

Key words: NAC reconstruction, areola reconstruction, areola tattoo, breast reconstruction, radiotherapy

Journal of Clinical Medicine
 MDPI

Review
Cutaneous Adverse Reactions Associated with Tattoos and Permanent Makeup Pigments

Beatrice Bălăceanu-Gurju^{1,2}, Eliza Apostol^{1,2}, Mădălina Caraiivan³, Ana Ion^{1,2,4}, Raluca Tatar^{1,5,6,7,8}, Marc Mădălina Mihai^{1,2,9}, Liliana Gabriela Popa^{1,2}, Cristina-Dorin Gurjar¹⁰ and Olga Anca Ozvan^{1,10}*

¹ Department of Oncologic Dermatology, "Elias" Emergency University Hospital, "Carol Davila" University of Medicine and Pharmacy, 02021 Bucharest, Romania; balaceanubeatrice@yahoo.com (B.B.-G.); eliza-olga.apostol@elias.ro (E.A.); mariaion@yahoo.com (A.I.); mara.madalinamihai@elias.ro (M.M.M.); liliana.popa@uniud.ro (L.G.P.); olga.anca.ozvan@uniud.ro (O.A.O.)
² Clinic of Dermatology, "Elias" Emergency University Hospital, 01161 Bucharest, Romania
³ Private Practice, 1401 Luxembourg, Luxembourg
⁴ Department of Plastic Reconstructive Surgery and Burns, "Grigore Alexandrescu" Clinical Emergency Hospital for Children, "Carol Davila" University of Medicine and Pharmacy, 02021 Bucharest, Romania
⁵ Department of Plastic Reconstructive Surgery and Burns, "Grigore Alexandrescu" Clinical Emergency Hospital for Children, 01082 Bucharest, Romania
⁶ Orthopedics and Traumatology Clinic, Clinical Emergency Hospital, 01445 Bucharest, Romania; gurjar.dorin@yahoo.com
* Correspondence: ralu.tatar@gmail.com

Abstract: Tattooing is the procedure of implanting permanent pigment granules and additives into the dermal layer of the skin, serving various purposes such as decoration, medical identification, or accidental markings. There has been a significant rise in the popularity of decorative tattooing as a form of body art among both teenagers and young adults. Thus, the incidence of tattoos is increasing, with expanding applications such as permanent makeup, scar camouflage, nipple-areola, lips, and eyebrows tattooing, and utilization in oncological radiotherapy such as colon marking. However, there have been reported a broad range of adverse reactions linked to tattooing, encompassing allergic reactions, superficial and deep cutaneous infections, autoimmune disorders induced by the Koberler phenomenon, cutaneous tumors, and others. These reactions exhibit different onset times for symptoms, ranging from immediate manifestations after tattoo application to symptoms emerging several years later. Given the limited information on a tattoo's side effects, this review aims to elucidate the clinical spectrum of cutaneous complications of tattoos in different patients. The analysis will investigate both allergic and nonallergic clinical presentations of tattoo-related side effects, microscopic findings from skin biopsies, and therapeutic outcomes. This exploration is essential to improve our understanding of tattoo-related cutaneous complications and associated differential diagnoses and highlight the significance of patient awareness regarding potential risks before getting a tattoo.

Keywords: tattoos; permanent makeup; cutaneous adverse reactions; tattoo-related complications

Received: 11 December 2023
 Revised: 7 January 2024

TATUAGGIO

PIGMENTI

DM

Articolo 2

Definizioni

Ai fini del presente regolamento si applicano le seguenti definizioni:

1) «dispositivo medico»: qualunque strumento, apparecchio, apparecchiatura, software, impianto, reagente, materiale o altro articolo, destinato dal fabbricante a essere impiegato sull'uomo, da solo o in combinazione, per una o più delle seguenti destinazioni d'uso mediche specifiche:

- diagnosi, prevenzione, monitoraggio, previsione, prognosi, trattamento o attenuazione di malattie,
- diagnosi, monitoraggio, trattamento, attenuazione o compensazione di una lesione o di una disabilità,
- studio, sostituzione o modifica dell'anatomia oppure di un processo o stato fisiologico o patologico,
- fornire informazioni attraverso l'esame *in vitro* di campioni provenienti dal corpo umano, inclusi sangue e tessuti donati,

e che non esercita nel o sul corpo umano l'azione principale cui è destinato mediante mezzi farmacologici, immunologici o metabolici, ma la cui funzione può essere coadiuvata da tali mezzi.

Articolo 33

Banca dati europea dei dispositivi medici

5.5.2017

IT

Gazzetta ufficiale dell'Unione europea

L 117/1

I

(Atti legislativi)

REGOLAMENTI

REGOLAMENTO (UE) 2017/745 DEL PARLAMENTO EUROPEO E DEL CONSIGLIO

del 5 aprile 2017

relativo ai dispositivi medici, che modifica la direttiva 2001/83/CE, il regolamento (CE) n. 178/2002 e il regolamento (CE) n. 1223/2009 e che abroga le direttive 90/385/CEE e 93/42/CEE del Consiglio

(Testo rilevante ai fini del SEE)

Articolo 51

Classificazione dei dispositivi

1. I dispositivi sono suddivisi nelle classi I, IIa, IIb e III, in funzione della destinazione d'uso prevista dei dispositivi e dei rischi che comporta. La classificazione è effettuata conformemente all'allegato VIII.

TATUAGGIO

PIGMENTI

NON DM

Regolamento UE per dermopigmentazione

REGOLAMENTO (UE) 2020/2081 DELLA COMMISSIONE

del 14 dicembre 2020

che modifica l'allegato XVII del regolamento (CE) n. 1907/2006 del Parlamento europeo e del Consiglio concernente la registrazione, la valutazione, l'autorizzazione e la restrizione delle sostanze chimiche (REACH) per quanto riguarda le sostanze contenute negli inchiostri per tatuaggi o trucco permanente

I fornitori che immettono sul mercato una miscela destinata alle pratiche di tatuaggio devono garantire che, successivamente al 4 gennaio 2022, sulla miscela siano riportate le seguenti informazioni:

- a) la dicitura «Miscela per tatuaggi o trucco permanente»;
- b) un numero di riferimento unico per l'identificazione del lotto;
- c) l'elenco degli ingredienti conforme alla nomenclatura stabilita nel glossario delle denominazioni comuni degli ingredienti a norma dell'articolo 33 del regolamento (CE) n. 1223/2009 oppure, in assenza di una denominazione comune dell'ingrediente, della denominazione IUPAC. In assenza delle denominazioni comuni degli ingredienti o di una denominazione IUPAC, indicare il numero CAS e il numero CE. Gli ingredienti devono essere elencati in ordine decrescente secondo il loro peso o volume al momento della formulazione. Per «ingrediente» si intende qualsiasi sostanza

<https://www.salute.gov.it/new/it/tema/sicurezza-giocattoli-e-prodotti-libero-consumo/miscele-tatuaggi-e-dermopigmentazione/>

TATUAGGIO

PIGMENTI

DM oggi presenti per tatuaggio areolare

Dispositivo	1938697	S	AR--	BIOCHROMADERM PIGMENTI	V9099 - DISPOSITIVI NON COMPRESI NELLE CLASSI PRECEDENTI - ALTRI	D.L.vo 46/97 attuazione Dir. CE 93/42	IIB - Classe IIB	26/03/2020
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FABBRICANTE	BIOTIC PHOCEA	62423788975	FR
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BIOCHROMADERM®

Réf : D001-XX

2ml · 60,00 € HT



Exemple d'un pigment 2ml
AR16 - Brown Velvet

CASISTICA

TIPO DI INTERVENTO DEMOLITIVO/RICOSTRUZIONE	mastec sec Madden+SE	mastec sempl+SE	SSM+SE	NSM+SE	lembo G. Dors+S E	lembo G. Dors+Pr	SRM+SE	ONCO PLASTICA II LIV
2005-2015	90	40	30	2	4	1	2	/
2022-2024	3	4	19	10	/		/	8
	SSM+PROT prepett	SSM+PROT sotto pettor	NSM+PROT sotto pettor	NSM+PROT prepett	RRM+PROT prepett	SRM+PROT prepett	SRM+PROT sotto pett	
2005-2015	/	/	2	/	/	/	/	
2022-2024	36	16	14	70	13	6	1	

IERI

Maggioranza di interventi two stages

Molto diffuse le mastectomie radicali o semplici con asportazione del NAC

Elevata richiesta di ricostruzione NAC per terminare iter ricostruttivo e migliorare l'aspetto della neo mammella

Ricostruzione capezzolo con lembi locali nella maggior parte dei casi

Esiti cicatriziali evidenti

TATUAGGIO AREOLARE **NON LEA** eseguito il regime ambulatoriale con codice correzione di cicatrice 86.84

vs.

OGGI

Elevato numero di NSM con risparmio del NAC

Ricostruzione DTI gold standard

Minor numero di NAC da ricostruire

Elevato numero di ricostruzione prepettorali

Non sempre possibile ricostruzione capezzolo con lembi locali per esiguo spessore del pannicolo sottocutaneo

Minor richiesta di ricostruzione NAC dalle pazienti soddisfatte del risultato DTI

TATUAGGIO AREOLARE **LEA** da 16 nov 2019

Chirurgia Plastica

86.02.3

TATUAGGIO PER PIGMENTAZIONE DEL COMPLESSO AREOLA-CAPEZZOLO

Tecnica di ricostruzione d'elezione : Tatuaggio 3D

OGGI

TATUAGGIO 3D

DERMOPIGMENTAZIONE	V0599 - KIT PER PROCEDURE CLINICHE - ALTRI	D.L.vo 46/97 attuazione Dir. CE 93/42	IIA - Classe IIa	09/05/2014	FABBRICANTE	PSIS S.R.L. - POLO DI STERILIZZAZIONE INTEGRATA IN SERVICE S.R.L.	0423601028
DERMOPIGMENTAZIONE	V0599 - KIT PER PROCEDURE CLINICHE - ALTRI	D.L.vo 46/97 attuazione Dir. CE 93/42	IIA - Classe IIa	09/05/2014	FABBRICANTE	PSIS S.R.L. - POLO DI STERILIZZAZIONE INTEGRATA IN SERVICE S.R.L.	0423601028

DM

Aspetto più realistico dell'areola mammaria
 Buon risultato anche in assenza di ricostruzione del capezzolo
 Possibile anche in caso di DTI pre-pettorale
 Possibile anche in caso di esiguo spessore del sottocute





Ministero della Salute

Il tatuaggio del complesso areola-capezzolo riservato al personale sanitario: la nota del Ministero della Salute

Il 15 maggio 2019 il Ministero della Salute ha diffuso una [nota](#) contenente alcuni chiarimenti in merito ai tatuaggi con finalità medica per pigmentazione del complesso areola-capezzolo. Nel documento il Ministero precisa che la prestazione “pigmentazione dell’areola – capezzolo” deve essere eseguita esclusivamente da chi esercita una professione sanitaria e in ambulatorio accreditato o autorizzato, a seconda che venga o non venga eseguita a carico del Servizio Sanitario Nazionale. In ogni caso, non può essere eseguita in strutture non sanitarie e da personale non sanitario.



Submit a Manuscript <https://www.wjcc.com> World J Clin Case 2022 December 6; 10(54): 12781-12796

DOI: 10.12999/wjcc.v10.i54.12791

ISSN 2307-4960 (online)

CASE REPORT

Complication after nipple-areolar complex tattooing performed by a non-medical person: A case report

Je Yeon Byeon, Tae Hoon Kim, Hwan-Jun Choi

Specialty type: Medicine, research and experimental

Je Yeon Byeon, Tae Hoon Kim, Hwan-Jun Choi, Plastic and Reconstructive Surgery, Soonchunhyang University Hospital, Cheonan KS002, South Korea

Provenance and peer review: Unolicited article; Externally peer reviewed.

Corresponding author: Hwan-Jun Choi, MD, PhD, Professor, Surgeon, Plastic and Reconstructive Surgery, Soonchunhyang University Hospital, Soonchunhyang 6-gil 31, Boosmyeong-dong, Dongnam-gu, Cheonan-si, Chungcheongnam-do, Cheonan KS002, South Korea. ipkorea@gmail.com

Peer-review model: Single blind

Peer-review reports scientific quality classification
 Grade A (Excellent): 0
 Grade B (Very good): 0
 Grade C (Good): 0
 Grade D (Fair): 0
 Grade E (Poor): 0

P-Reviewer: Agrawal P, United States; Touthini S, Morocco

Received: September 25, 2022

Peer-review started: September 25, 2022

First decision: October 12, 2022

Revised: October 14, 2022

Accepted: November 7, 2022

Article in press: November 7, 2022

Published online: December 6, 2022

Abstract

BACKGROUND

Compared to earlier, there has been an increase in the tattoo procedures for cosmetic purposes; and there has also been an increase in the tattoo procedures performed by non-medical personnel. In South Korea, only tattoos performed by a doctor are considered legal; however, there is still some debate over whether tattoo procedures performed by non-healthcare providers should be considered legal.

CASE SUMMARY

A 28-year-old woman visited our hospital with pain in both nipples and heat sensation over the last 4 d. She had a history of a nipple tattoo performed by an unlicensed person. Pinpoint bleeding was noted in both areolar areas, and the exudate mixed with pus and orange color ink was discharged. Oral medication and tulle with foam dressing were performed under the impression of cellulitis and allergic reaction. After 4 wk, nipples remained dark brown in color, resulting in a color mismatch between the nipple and orange-colored areola. The size of the areola was also found to be distinctly asymmetrical after healing. This complication may have been caused by the use of illegal ink or unsanitary procedures, or a problem may have occurred in the post-tattoo management stage.

CONCLUSION

Doctors use approved ink, aseptic procedure and appropriate postoperative care, and appropriate management can be performed in case of complications.

Key Words: Infections; Nipples; Tattooing; Licenses; Case report

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Supportive Care in Cancer (2024) 32:153
<https://doi.org/10.1007/s00520-024-08351-3>

REVIEW



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Keywords Medical tattooing · Women health services · Breast cancer nursing · Oncology · Nipple-Areola complex reconstruction

Il tatuaggio: tra arte e rinascita

CONCLUSIONI

Evoluzione delle tecniche oncoplastiche (demolizione /ricostruzione): ricostruzione DTI

Completamento iter ricostruttivo con restituito ad integrum estetico/funzionale

Affinamento delle tecniche di dermopigmentazione

Dermopigmentazione areolare: **LEA**

Ricostruzione NAC mediante tatuaggio : gold standard