Tattooing and multiple sclerosis: A study among 445 French patients

Le tatouage et la sclérose en plaques : une étude chez 445 patients français

About 17% of the French adults have one tattoo or more [1]. Tattoos can improve one's body image and bolster ego [2,3]. Nowadays, patients with chronic medical conditions may be interested in getting tattooed, whether the underlying reasons or motivations are related to their medical conditions or not [4–7]. In our specialized consultation dedicated to tattoo complications [8], we recently met a patient under treatment by interferon beta for multiple sclerosis (MS) with recurrent healing issues and possible infection following tattooing. Based on this unique case, we aimed to determine the extent of tattooing practice, real-life experience and possible complications in a cohort of French patients with MS.

We performed an observational self-reported Internet survey between September the 4th and September the 29th 2017. A standardized anonymous questionnaire was available on Google. Patients were recruited through the social network pages (Facebook®) of a French foundation for MS research (foundation ARSEP, https://www.arsep.org). No induction was given to complete the survey. Patients were asked about demographic information and age at MS diagnosis. Detailed questions about tattooing included whether the patient had tattoos, whether they had been tattooed before and after the MS diagnosis, whether they experienced complications after tattooing (delay in healing, itch, transient or permanent swelling on a part or a whole tattoo, local and systemic infection, reaction restricted to a color or other) and whether they were planning to get one within the next 12 months. If they had been tattooed after MS diagnosis, we asked whether they sought for medical advice from their general practitioner/neurologist before tattooing, whether they warned the tattooist of MS and which MS treatment they receive while getting tattooed. We eventually asked about the positive impact of tattoo(s) on their body image in relation to MS. Statistical analysis was conducted as reported elsewhere [5].

Out of the 450 answered questionnaires we received, 445 were analyzed: 387 of the respondents were women (87%) and 58 men (13%); sex ratio 6.7:1. The respondents’ characteristics are summarized in the table 1. Briefly, 79.3% (n = 353) of the respondents had tattoos, and 87% of them (n = 307) were women. Tattooed respondents were younger than non-tattooed ones (mean age 37.6 ± 8.6 yo vs. 40.0 ± 10.9 yo respectively, P = 0.02).

Forty-seven percent (n = 209) of the respondents claimed that they planned to get a tattoo within the next 12 months, while 25% (n = 111) did not (table I). Among those planning to get a tattoo, 80.8% (n = 169) have already had one. There was no significant difference between genders or between those with tattoos or without previous tattoos (data not shown). Fifty-seven percent (n = 199) of the tattooed patients had been tattooed before MS diagnosis. Among them, 57.3% (n = 114) had been tattooed again after. A total of 265 patients (75.7%) had undergone tattooing after MS diagnosis.

Twenty-one percent (n = 56) discussed or sought advice from their physician before tattooing, while 50.4% (n = 133) warned the tattooist of MS diagnosis in half of the cases. Neither gender, nor past tattoos before MS diagnosis had any significant influence regarding seeking for medical advice before tattooing or informing the tattooist of MS (P > 0.05). A majority of patients with MS diagnosis (84.5%, 218/258) acknowledged that they got tattooed while under various MS immunomodulating agents. The 3 most common treatments were interferon beta (31%), natalizumab (15.1%) and teriflunomide (11.2%), followed by glatiramer, dimethyl fumarate (10.9% each), fingolimod (10.5%), and famipirdine (7%). Conventional systemic treatments such as corticosteroids, rituximab, azathioprine or mycophenolate mofetil were rarely found. Some patients reported several different treatments while getting tattooed. However, we did not know if they were combined together during one tattoo or if there were different treatments during different tattoo sessions. Only 16.3% of the patients who got tattooed after MS diagnosis were free of any treatment. Forty-four patients (12.5%) reported at least one complaint or complication regarding one of their tattoos. Patients who were tattooed only before the MS diagnosis reported significantly less complications than those with tattoos before and after MS diagnosis (7%, n = 6 vs. 18.4%, n = 38, P = 0.02). The most common reported complaint was delay in tattoo healing (4.5%). Less than 2% of the patients reported complications such as permanent swelling of a part or a whole tattoo (1.9%), reaction to a tattoo color (1.5%) and local infection (1.1%). Abnormal bleeding, pain, contact dermatitis and burning sensation during MRI were all less than < 0.8% each. No patient reported generalized infection after tattoo. No patient mentioned MS flare-up after tattooing. Of note, 27.5% of the patients without treatment (n = 11) reported at least one complaint or complication on a tattoo. Two patients felt they had a better tolerance to the tattooing procedure and pain because of MS.

Thirty-nine percent (n = 102/261) of those who got at least one tattoo after MS diagnosis acknowledged a positive impact of...
Having experience in tattooing among women is greater than in men, while the prevalence of tattoos among MS patients is unknown, while the current prevalence in the French adult population is about 17% [1]. We obtained a higher number of participants compared to previous similar studies among patients with psoriasis [5] or bleeding disorders [9]. We observed a predominance of women respondents as in our previous studies [5,9]. This can be explained variously: a higher interest of women to take part in such studies and share their experience, the higher prevalence of MS among women or because more women are tattooed than men [1].

In our experience, patients may be reluctant to discuss with their physician about tattooing. They may not perceive tattooing as being risky in regard to their disease or to immunosuppressive treatments [10]. They may also fear judgment and excessive refusal from the physician. They usually see the tattooist as more knowledgeable [5,9]. The results here follow the same pattern: only 21% of the patients discussed with their physician before tattooing, while half of them warned the tattooist of MS. These results are better than for psoriasis patients (8.5% warn their physician and 48.9% warned the tattooist) [5], but lower than patients with bleeding disorders (61% asked advices from their physician and 74% warned the tattooist) [9]. The risk of acute bleeding among the latter group of patients may explain this higher rate.

The frequency of complication after tattooing is highly variable according to studies, from 2 to 27% [11]. Almost a third of the tattooed individuals report minor symptoms such as itch or swelling on one of their tattoos beyond 3 months after tattooing [12]. Minor symptoms included here delay in healing (4.5%), itch (4.1%) and transient swelling (2.6%). Permanent swelling, reaction to a tattoo and local infection were at a low level here. None of the patients reported any flare-up of MS disease after tattooing. We did not collect the delay of onset of the complication after tattooing, the number of tattoos by patient or tattoo sessions by tattoos. We cannot evaluate whether a specific...
immunomodulating agent was more likely to be associated with complications. MS is a chronic disabling disease that has an impact on the body image [13] and 39% of the patients reported a positive impact of tattoos on their body image, which is rather low compared to psoriasis (82%) [5] or patients with bleeding disorders (65%) [9]. We did not ask specifically for the motivations for tattooing, but the patients could comment freely at the end of the study. The analysis of the verbatim record revealed that patients displayed the “usual” motivations such as body embellishment and expression of personal narratives in relation with their disease. Some patients clearly explained that tattoos were a mean to cope with their disease and regain control of their bodies. One patient mentioned that people were now paying attention to her tattoos and not to “her handicap” or to “her wheelchair”. On the other hand, other patients explained that tattoos were personal but had nothing to do with the disease. We are well aware of the limitations of our study design. They have been discussed in detail elsewhere [5]. Briefly, they include selection bias, recollection bias, misunderstanding of the questions, misinterpretation of one’s symptoms, and lack of clinical examination by a physician. We selected the most eager tattooed individuals willing to share their experience. We did not enquire about comorbidities (such as diabetes, etc.), the number of tattoos before and after MS and the precise treatment protocol and dosage during tattooing. At last, our results are not applicable to the overall population with MS.

To conclude, for some MS patients, tattoos are a mean to cope with MS, to regain control of the body, improve body image and interact with others. Acknowledging the limits of our study, we did not found excessive self-reported side effects, even though tattoos were often performed under various treatments. Tattooing did not influence MS. MS patients are still exposed to the same complications after tattooing as the general population. Patients should be able to discuss with their physicians in case they are interested in getting a tattoo. We do not see any specific contraindication for this group of patients [14].

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References


Nicolas Kluger1,2
1University of Helsinki and Helsinki University Central Hospital, Department of Dermatology, Allergology and Venereology, Helsinki, Finland
2 Assistance publique-Hôpitaux de Paris, Bichat-Claude Bernard Hospital, “Tattoo” consultation, Department of dermatology, 75018 Paris, France

Correspondence: Nicolas Kluger, Helsinki University Central Hospital and University of Helsinki, departments of Dermatology, Venereology and Allergology, Meilaheidenite 2, P.O. Box 160, 00029 HUS, Finland
nicolas.kluger@hhus.fi

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