Journal of Skin and Stem Cell
Volume 10 · Issue 2 · e137862

OPEN PEER REVIEW

Skin Complications Associated with Interferon-β Treatment in Patients with Multiple Sclerosis, Tehran in 2021 - 2

Fakhri Allahyari, Esmat Davoudi-Monfared, Hamideh Molaei, Fatemeh Shahabi, Davoud Tanbakuchi, Mohsen Shahrivar

SUBMITTED	REVISED	ACCEPTED	DOI
27 May 2023	11 Jun 2023	14 Jun 2023	10.5812/jssc-137862

About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

More about open peer review: brieflands.com/knowledgebase/opr

Contents

1 **Original submission** Referee 1, Referee 2, Associate Editor, Editor-in-Chief 2

2 **Revision 1** Referee 1, Referee 2, Associate Editor, Editor-in-Chief 4

Authors' reply to reviewers 5

Reviewer and editor comments 7

1 Original submission

4 comments · 27 May 2023 – 31 May 2023

Referee 1 Reviewer

MAJOR REVISION 27 May 2023

Dear AE,
The manuscript needs the following revisions:
Introduction
The introduction effectively highlights the prevalence of MS, the use of disease-modifying drugs (DMDs), and the role of interferons in reducing the relapse rate and delaying disability. The objectives of the study are also clearly stated. Here are a few suggestions for improvement:

Background: The introduction could benefit from providing a more detailed explanation of the pathophysiology and clinical manifestations of MS. This would help readers understand the context and importance of studying skin side effects in MS patients.

Epidemiology: While the estimated global prevalence of MS is mentioned, it would be beneficial to provide a brief explanation of the geographic and demographic distribution of the disease. This can help readers understand the global impact of MS and the relevance of studying skin side effects in a specific population.

Mechanism of Action: The statement that the mechanism of action of interferon-beta (IFNβ) in MS is multifactorial and incompletely understood could be further elaborated. Providing a brief overview of the proposed mechanisms or theories behind the therapeutic effects of IFNβ would enhance the understanding of its use in MS treatment.

Safety Profile: The description of the safety profile of interferons in MS treatment is well-presented, mentioning the commonly observed side effects. It would be beneficial to briefly discuss the impact of these side effects on patients' quality of life or treatment adherence to highlight the need for investigating skin side effects specifically.

Materials and Methods:
1- It would be helpful to provide information on the eligibility criteria and how patients were identified and recruited from Baqiyatallah Hospital.
2- It would be helpful to explain why these criteria were chosen and how they relate to the research objectives. The exclusion criteria are briefly mentioned, but it would be useful to clarify whether any patients were excluded based on these criteria and, if so, how many.

3- It would be beneficial to provide more details on how the severity of hair loss and skin complications was assessed or measured. Additionally, it would be helpful to explain how the dermatologist filled out the checklist and how any discrepancies or uncertainties in the assessment were addressed.

4- The statistical analysis methods are appropriately described, including the use of descriptive statistics, Chi-square tests, one-way analysis of variance, non-parametric tests, and logistic regression. However, it would be helpful to briefly explain why these specific statistical tests were chosen and how they align with the research questions. Additionally, it would be useful to mention any assumptions made for each statistical test and how missing data or outliers were handled.
RESULT:
The prevalence of skin complications is reported, with erythema at the injection site being the most common (45.2%). It would be helpful to provide the prevalence rates or percentages for other skin complications mentioned, such as eczema, hives, skin rash, and other related conditions. Additionally, it would be beneficial

to mention any specific associations or trends observed between the demographic or clinical variables and the occurrence of skin complications.

discussion:
Providing recommendations for clinical practice, such as monitoring and preventive measures, would enhance the practical implications of the study.

Referee 2 Reviewer

MAJOR REVISION 30 May 2023

1. All the related dates, including periods of recruitment, exposure, follow-up, and data collection, should be explained in detail.
2. According to the authors, sampling was according to consensus. I would appreciate it if you could explain in more detail the sampling applied in this study.
3. How did you handle missing data, if any?
4. The treatment details are not comprehensively explained in the methodology.
5. What are the strengths and limitations of this study?

Associate Editor

MAJOR REVISION 31 May 2023

Dear EIC,

It is a useful study but needs some revision. All comments should be addressed by the authors, and changes should be made based on the comments.

Editor-in-Chief

MAJOR REVISION 31 May 2023

Dear Author,
Thank you for submitting the article. It has fundamental errors and needs some revision. Please revise it based on the reviewers' and AE's comments.

2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Reviewer 1:
1. All the related dates, including periods of recruitment, exposure, follow-up, and data collection should be explained in details. Answered and highlighted
2. According to the authors, sampling was according to consensus. I would appreciate it if you can explain in more details regarding the sampling applied in this study. Answered and highlighted
3. How did you handle missing data, if any? This study had insignificant missing data (2%) that did not need to be managed.
4. The treatment details lacks a comprehensive explanation in the methodology.
5. What are the strengths and limitations of this study? Answered and highlighted
Reviewer 2:
Dear AE,
The manuscript needs some revisions as below:
Introduction
The introduction effectively highlights the prevalence of MS, the use of disease-modifying drugs (DMDs), and the role of interferons in reducing relapse rate and delaying disability. The objectives of the study are also clearly stated. Here are a few suggestions for improvement:

Background: The introduction could benefit from providing a more detailed explanation of the pathophysiology and clinical manifestations of MS. This would help readers understand the context and importance of studying skin side effects in MS patients. Answered and highlighted

Epidemiology: While the estimated global prevalence of MS is mentioned, it would be beneficial to provide a brief explanation of the geographic and demographic distribution of the disease. This can help readers understand the global impact of MS and the relevance of studying skin side effects in a specific population. Answered and highlighted

Mechanism of Action: The statement that the mechanism of action of interferon-beta (IFNβ) in MS is multifactorial and incompletely understood could be further elaborated. Providing a brief overview of the proposed mechanisms or theories behind the therapeutic effects of IFNβ would enhance the understanding of its use in MS treatment. Answered and highlighted

Safety Profile: The description of the safety profile of interferons in MS treatment is well-presented, mentioning the commonly observed side effects. It would be beneficial to briefly discuss the impact of these side effects on patients' quality of life or treatment adherence to highlight the need for investigating skin side effects specifically. Answered and highlighted

Materials and Methods:
1- It would be helpful to provide information on the eligibility criteria and how patients were identified and recruited from Baqiyatallah Hospital. Answered and highlighted
2-It would be helpful to explain why these criteria were chosen and how they relate to the research objectives. The exclusion criteria are briefly mentioned, but it would be useful to clarify whether any patients were excluded based on these criteria and, if so, how many. Answered and highlighted

3-It would be beneficial to provide more details on how the severity of hair loss

and skin complications were assessed or measured. Additionally, it would be helpful to explain how the dermatologist filled out the checklist and how any discrepancies or uncertainties in the assessment were addressed. Answered and highlighted

4- The statistical analysis methods are appropriately described, including the use of descriptive statistics, Chi-square tests, one-way analysis of variance, non-parametric tests, and logistic regression. However, it would be helpful to briefly explain why these specific statistical tests were chosen and how they align with the research questions. Additionally, it would be useful to mention any assumptions made for each statistical test and how missing data or outliers were handled. This study had insignificant missing data (2%) that did not need to be managed.
RESULT:
he prevalence of skin complications is reported, with erythema at the injection site being the most common (45.2%). It would be helpful to provide the prevalence rates or percentages for other skin complications mentioned, such as eczema, hives, skin rash, and other related conditions. Additionally, it would be beneficial to mention any specific associations or trends observed between the demographic or clinical variables and the occurrence of skin complications. Answered and highlighted

discussion:
Providing recommendations for clinical practice, such as monitoring and preventive measures, would enhance the practical implications of the study. Answered and highlighted

2 Revision 1

4 comments · 11 Jun 2023 – 14 Jun 2023

Referee 1 Reviewer

ACCEPT 11 Jun 2023

Dear AE,
I reviewed the manuscript again. The great effort in improving the manuscript is highly appreciated.
The authors have addressed all comments.
Thank you

Referee 2 Reviewer

ACCEPT 11 Jun 2023

Dear authors,
Thank you very much for the revisions.
Best regards

Associate Editor

ACCEPT 14 Jun 2023

Dear EIC,
Thank you for your explanation, and I find the manuscript acceptable.

Editor-in-Chief

ACCEPT 14 Jun 2023

Dear Author,
Thank you for paying attention and responding to the reviewer's comments. The manuscript is acceptable now.