

LETTERS TO THE EDITOR

Effect of COVID-19 pandemic on psoriatic patients dermatology admissions and biologic treatment adherences: A single-center retrospective study

To the Editor,

Coronavirus disease 2019 (COVID-19) affected patients' hospital admission rates and treatment adherence since the beginning of the pandemic.¹ This retrospective cohort study on 1525 psoriatic patients was conducted in a dermatology clinic in Turkey, from December 1, 2019, to August 31, 2020. We aim to demonstrate the effect of pandemic on psoriatic patients by analyzing changes of their hospital admissions and treatment adherences. In Turkey, the first case was seen on March 11, 2020. Patients were subdivided and analyzed in respect to their admission dates as pre-COVID (PC) (December 2019, January and February 2020), early COVID (EC) (March, April, May 2020), and late COVID (LC) (June, July, August 2020). Chi-squared test was used in the analysis of categorical variables, and Mann-Whitney *U* test was used in the analysis of numerical variables.

At the PC, EC, and LC period, 1084, 169, and 246 psoriatic patients were being followed in our clinic, respectively. Many patients dropped from follow-up with the start of the EC period, but the most drastically affected population were patients under biologics. At the PC period, 165 patients (15.2% of all PC patients) made admission for biologics: 17 of them (10.2%) were first-time biologic users and the remaining 149 (%89.8) patients made admission for follow-up. During the EC period, 14 of 196 (%7.1) patients made admission for biologics: 3 (21.4%) of them were first-time biologic users and the remaining

11 (78.6%) were follow-up patients. At the LC period, 18 (7.3%) of 246 patients were using biologics: 4 (22.2%) of them were first-time biologic users and 14 (77.8%) patients were admitted for follow-up.

All psoriatic patients' treatment follow-ups were interrupted to some degree during pandemic period. Treatment interruption rate was highest in patients under biologics compared to other treatment categories such as phototherapy, topical treatments, and non-biological systemic therapies ($p < 0.001$). 8.5% of patients who were using biologics at PC period came to follow-up at EC period, compared to 18.1% of patients who were using other treatments during the same period. This effect also observed in the LC period: percentages of total psoriatic patients and biologic users who came for follow-up were 22.7% and 10.9%, respectively (Figure 1).

Patient characteristics were similar between patients who continued their biologic treatments and who stopped/interrupted using biologics during EC and LC period. There was no significant difference between these two groups age ($p = 0.12$), gender ($p = 0.31$), disease duration ($p = 0.71$), biologic duration ($p = 0.51$), PASI ($p = 0.1$), and presence of psoriatic arthritis ($p = 0.13$).

Proportions of patients who started biologics in all biologic users showed variability between periods. During the PC period, %10.2 of patients who were using biologics were newly commenced on to a biologic. This proportion increased to %21.4 during EC and %22.2 during the LC period (Figure 2).

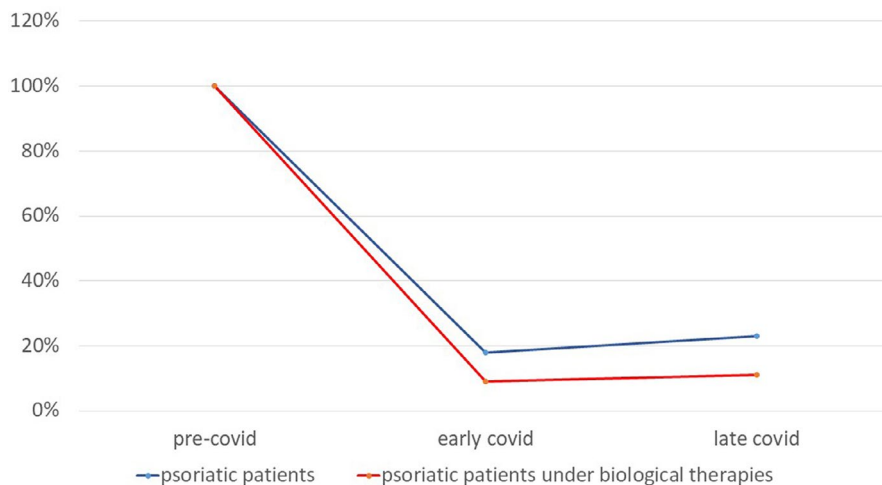
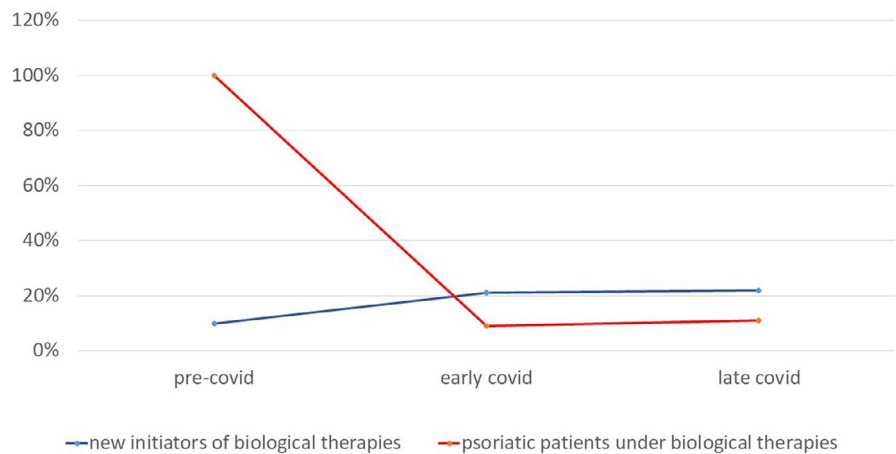


FIGURE 1 With the start of the pandemic, all psoriatic patients' follow-up admission rates were reduced, but frequency reduction was more significant in patients under biological therapies

FIGURE 2 Percentage of new initiators of biological therapies to all biologic users increased during the early and late COVID period



This study showed that COVID-19 pandemic has a negative impact on psoriatic patients' management, especially on their follow-ups and treatment adherences. At the beginning of pandemic, dermatologists were having disagreements on the continuation or initiation of biologic drugs, as there was insufficient information about course of COVID-19 disease in psoriatic patients and the effect of biologics on the disease.^{2,3} Patient attitude about receiving treatment also changed during this period due to either healthcare access difficulties or concern on the safety of these drugs.^{4,5} In Turkey, patients were able to receive their previously prescribed biologics during EC and LC period owing to regulations for lowering hospital admissions. We think follow-up reduction was caused mainly by this regulation. Reduction of patient follow-up for all psoriatic patients may cause disease deterioration, and this may cause rise of biologic initiation as showed in our study.

CONFLICT OF INTEREST

Dr. Ahmet Kağan Özdemir, Dr. Yıldız Hayran, Dr. Orhan Şen, and Dr. Akın Aktaş do not report any conflict of interest.

ETHICAL APPROVAL

Ethical committee approval obtained at 11.11.2020 for E1-20-1271 numbered research.

INFORMED CONSENT

This retrospective study is conducted with data, which is retrieved from our institutions' routine submission system; as a result, we did not obtain written informed consent from patients.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author, A.K.Ö. The data are not publicly available due to privacy of research participants.

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