

Age, disease duration, sex and other common factors may predict which patients with psoriatic arthritis achieve inactive disease when treated with TNF inhibitors

Introduction

Psoriatic arthritis (PsA) is a chronic, inflammatory disease of the joints and entheses, which is where tendons and ligaments connect to bone. The disease often appears between ages 30 and 50. For many people, it starts about 10 years after psoriasis develops, but some develop PsA first or without ever developing or noticing psoriasis. The burden of the disease includes joint pain and swelling, reduced physical function, reduced mobility, fatigue, anxiety, and depression. If the patients are not treated, they may experience a reduced ability to work, limited social participation, and an overall lower quality of life.

New treatment options with Tumor Necrosis Factor inhibitor (TNFi) have contributed to major improvements in health and quality of life for patients with PsA. Tumor necrosis factor is a protein in the body that causes inflammation. TNF inhibitors are drugs that help reduce inflammation and are used worldwide to treat inflammatory conditions such as psoriatic arthritis. Nonetheless, many patients treated with TNFi do not achieve low disease activity or remission as hoped. Remission means a period where the symptoms and underlying inflammation have gone.

About EuroSpA

This study is performed in the EuroSpA Research Collaboration Network. This is a scientific collaboration among rheumatologists and scientific staff from 17 European countries who share registry data to perform studies like this one. The collaboration allows for data of larger groups of patients to be collected. This heightens the quality of the study and provides greater certainty to the results than if the study were to be performed in a single country. The 17 countries are Netherlands, Czech Republic, Spain, Slovenia, United Kingdom, Denmark, Estonia, Italy, Iceland, Norway, Germany, Portugal, Finland, Romania, Switzerland, Sweden, and Turkey. 13 of these countries contributed data to this study.

What did the authors hope to find?

The primary aim of the study was to identify factors that may predict which patients with PsA achieve inactive disease after 6 months of treatment with TNFi.

Who was studied?

Data from 13.369 patients with psoriatic arthritis was included. All patients were between the age of 18 and 90 years and started treatment with TNFi in the study period (2009-2018).

How was the study conducted?

This study is a real-world study based on data from registries where we look at how the patients are doing in real populations. This type of study helps assess how well medication works. It stands in contrast to clinical studies where the study population is very selected on for example age and absence of other diseases, thereby excluding many people from entering the study.

Data from the 13 countries were collected on different variables such as age, sex, blood test results, disease activity, physical function, biological drug prescription and treatment start year. Calculations were made to find predictors for achieving inactive disease with TNFi treatment.

Main results

- 25% of patients achieved inactive disease within 6 months from starting treatment with TNFi

- Five predictors of inactive disease were identified:
- **Age:** Higher age at treatment start meant less chance of inactive disease at 6 months.
 - **Disease duration:** The longer patients had been sick prior to starting treatment, the less chance of inactive disease at 6 months.
 - **Sex:** Men were more likely to achieve inactive disease at 6 months than women.
 - **CRP:** Patients with a CRP blood test result higher than 10 mg/l were more likely to achieve inactive disease at 6 months than patients with a CRP blood test result lower than 10 mg/l.
 - **Fatigue:** Patients with lower fatigue levels were more likely to achieve inactive disease at 6 months than patients with higher fatigue

What do the authors plan to do with this information?

The results of the study have been published in an international scientific journal and presented at congresses for other health care professionals who work in this field. We further plan to share the results through information like this. This study provides valuable insights into personalized treatment approaches for PsA patients using TNF inhibitors. It emphasizes the need for regular monitoring, considers patient-reported outcomes, and acknowledges the individualized nature of treatment responses. Additional research on the subject is planned.

What does this mean for me?

If you are diagnosed with psoriatic arthritis and beginning treatment with TNFi, these results might help you to better understand how good your chances are of achieving remission or low disease activity. This study helps doctors better understand how to choose and adjust PsA treatments based on individual characteristics, making sure you get the most effective and personalized care. If you have any concerns about your disease or your treatment, you should talk to your doctor.

This is a plain language summary of the scientific publication from EuroSpA: *“Predictors of DAPSA28 remission in patients with psoriatic arthritis initiating a first TNF inhibitor: results from 13 European registries”* by Linde, Ørnbjerg, Georgiadis et. al. The original work was financially sponsored by Novartis. You can read the original article published in *Seminars in Arthritis and Rheumatism* in 2022 here: <https://doi.org/10.1093/rheumatology/kead284>

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