One-third of patients with axial spondyloarthritis experience a period without pain when treated with TNFi

Introduction

Axial spondyloarthritis is a chronic progressive inflammatory disease characterized by involvement of the joints in the neck, back, hip and pelvis. The onset of axSpA is usually before the age of 45 years. The burden of the disease includes back pain, reduced physical function, reduced mobility, fatigue, anxiety, and depression. In the absence of effective treatment, patients may experience a reduced ability to work, limited social participation, and an overall lower quality of life. Axial spondyloarthritis can be classified radiographic disease and non-radiographic disease depending on whether certain findings are present on radiographs of the pelvis. Patients with non-radiographic disease are more frequently women and have less measurable inflammation compared to patients with radiographic disease. However, the disease burden appears to be similar between patients with both types of axial spondyloarthritis.

Patient reported outcomes (PROs) are outcomes directly reported by the patient who experienced it. It stands in contrast to an outcome reported by someone else, such as a physician-reported outcome, and provides valuable data that cannot be obtained from observing or examining the patient. PROs include pain, fatigue, disease activity, and functional ability.

About EuroSpA

This study is performed in the EuroSpA Research Collaboration Network. It is a scientific collaboration among rheumatologists and scientific staff from 16 European countries who share registry data to perform studies like this one. The collaboration allows for data regarding 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 16 countries are: Netherlands, Czech Republic, Spain, Slovenia, United Kingdom, Denmark, Estonia, Italy, Iceland, Norway, Portugal, Finland, Romania, Switzerland, Sweden, and Turkey.

What did the authors hope to find?

The primary aim of the study was to investigate how well patients felt 6 to 24 months after starting biological treatment with Tumor Necrosis Factor inhibitor (TNFi). Tumor necrosis factor is a protein in the body that causes inflammation. TNF inhibitors are drugs that help stop inflammation and are used worldwide to treat inflammatory conditions such as axSpA. In addition, TNFi reduce inflammation and can reduce disease progression by targeting Tumor Necrosis Factor. In this study it was investigated how many of the patients were in remission, meaning a period where the symptoms and underlying inflammation have gone. Also changes in PROs over time were calculated.

The secondary aim was to investigate whether there was a difference in PROs between patients with radiographic disease and patients with non-radiographic disease.

Who was studied?

Data from 19,498 patients with axial spondyloarthritis were included. All patients were above 18 years old, started treatment with TNFi in the study period, and answered at least one questionnaire about PROs.

How was the study conducted?

This study is a real-world study based on data from registries. This type of studies helps assess how well medication works and how the patients are doing in real populations. This 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 15 countries were collected on fatigue, disease activity, and functional level. Calculations were made to compare changes in PROs and PRO remission rates at 6, 12, and 24 months after start of TNFI treatment.

Main results

- Pain was on average reduced by approximately 60% at 6 months after start of biological treatment.
- Similar improvements were found for fatigue, disease activity and functional ability.
- Pain, fatigue, and functional level were all increasingly better from 6 to 24 months after start of biological treatment.
- 13% of the patients with **very high pain scores** before starting treatment experienced very low pain scores after 6 months.
- 32% of the patients with **moderate pain scores** before starting treatment experienced very low pain scores after 6 months.
- Patients with radiographic disease felt slightly better over time than patients with non-radiographic disease.

What do the authors plan to do with this information?

We plan to share the results through information like this. Additional research on the subject is planned.

What does this mean for me?

If you are diagnosed with axial spondyloarthritis, these results tell us that you will have good chances of feeling better in regards to pain, fatigue, disease activity, and functional ability when you are treated with TNFi. 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: "*One-Third of European Patients with Axial Spondyloarthritis Reach Pain Remission With Routine Care Tumor Necrosis Factor Inhibitor Treatment"* by Ørnbjerg, Rugbjerg et. al. The original work was financially sponsored by Novartis. You can read the original article published in The Journal of Rheumatology in 2023 here: https://www.jrheum.org/content/early/2023/01/10/jrheum.220459.long

This plain language summary was written by Anne Øraker Mikkelsen, Lise Hyldstrup, Stig Winther Nielsen, Lene Laursen, Lykke Ørnbjerg, Merete Hetland and Mikkel Østergaard. For more information on EuroSpA, visit www.eurospa.eu or e-mail us at info@eurospa.eu