BACKGROUND

- Non-radiographic axial spondyloarthritis (nr-axSpA) is an immune-mediated inflammatory rheumatic disease, especially affecting the spine and sacroiliac joints (1).
- It is intensively discussed whether nr-axSpA should be considered as a distinct disease or as an early stage of ankylosing spondylitis (AS) (2, 3).
- There is no separate code for nr-axSpA in the German ICD-10-GM coding system and it is coded with the same code for AS since 2014 (4).
- Very limited information is available regarding prevalence, patient history, and biological treatment patterns in nr-axSpA patients in Germany.

OBJECTIVES

- The aim of the study was to apply a claims data specific algorithm to identify possible nr-axSpA patients in a German claims database.
- Further objectives included the estimation of the prevalence, and the description of the medical history as well as the biologic treatment patterns in nr-axSpA patients in Germany.

METHODS

Data source

- This retrospective database study used claims data from the German “Institut für angewandte Gesundheitsforschung Berlin” (InGef) research database, which has anonymized claims data of about 4 million insured individuals.
- This sample represents 5.6% of the Statutory Health Insurance population and 4.8% of the German population and has been adjusted to represent the German population in terms of age and gender.

Study design and patient selection (Figure 1)

- The study considered data from 01 January 2009 through 31 December 2015. Patients continuously observable in the database from 01 January 2009 through 31 December 2014 were included.
- The enrolment period was defined as the year 2013 leading to:
  - Pre-index period from 01 January 2009 until the index quarter in 2013 (16 to 19 quarters depending on the index quarter)
  - Post-index period from the index quarter until 31 December 2014 (4 to 7 quarters depending on the index quarter and the end of post-index period)
- Furthermore, a subgroup of patients observable for an 8 quarters post-index period until 31 December 2015 was analyzed for 42% of the nr-axSpA patients included in the study.
- A claims-data specific algorithm developed by Boonen and colleagues (5) to identify nr-axSpA patients was adopted to the German setting and reviewed by two German rheumatologists.
- Patients were identified as nr-axSpA if they showed a diagnosis of another inflammatory spondylopathy (oSp) based on the German ICD-10-GM code (M45.-) in 2013 (index quarter), had a history of at least two diagnoses of back pain (M54.-) or disc disorders (M50.- to M53.) and no diagnosis of AS (M45.-) in the pre-index period.

RESULTS

Study population, prevalence and progression rate

- After applying the algorithm, a total of 869 possible nr-axSpA patients were identified in the InGef database (Figure 2), resulting in a 2013 prevalence of 26.2 per 100,000 persons (0.3%) in Germany.
- For the subgroup analysis of biological treatments, 852 patients were available (Figure 2).
- Almost two-thirds of the potential nr-axSpA patients were female (64%), the mean age was approximately 58 years, and the largest portion of patients (22%) were between 70-79 years old.
- The progression rate of the prevalent nr-axSpA patients to AS in the post-index period spanning from the index quarter until 31 December 2014 was 13%.

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LIMITATIONS

- The identification of nr-axSpA patients with claims data is challenging as there is no specific ICD-10-GM code established in the German healthcare system to distinguish between AS and nr-axSpA.
- The applied algorithm is limited to the fact that the coding of other inflammatory spondylopathy might be inaccurate and incomplete.
- In German claims data, no MRI, X-ray assessments, and laboratory tests are available and therefore, could not be used for the classification of disease.
- Our approach to identify nr-axSpA patients is not able to distinguish between incident and prevalent nr-axSpA patients.
- Outpatient diagnoses are only recorded on a quarterly basis which is why the biological prescriptions could not be clearly linked to nr-axSpA.

CONCLUSIONS

- The classification of nr-axSpA patients is challenging and the differentiation to AS is still difficult.
- Contrary to expectations, rheumatologists were not the most frequently visited physicians by the potential nr-axSpA patients.
- Additional studies based on claims data would greatly benefit from the establishment of a separate ICD-10-GM code for nr-axSpA in Germany.

REFERENCES


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