

Axial spondyloarthritis - with special emphasis on prevalence, perceived health and predictors

Akademisk avhandling

Som för avläggande av medicine doktorsexamen vid Sahlgrenska akademien, Göteborgs universitet kommer att offentligens försvaras i föreläsningssalen våning 3, Guldhedsgatan 10A, Göteborg, fredagen den 16 december 2016, klockan 13:00

av Ulf Lindström

Fakultetsopponent:

Professor Gary Macfarlane

University of Aberdeen, Scotland

Avhandlingen baseras på följande delarbeten

- I. Lindström U, Exarchou S, Sigurdardottir V, Sundström B, Askling J, Eriksson J K, Forsblad-d'Elia H, Turesson C, Kristensen L E, Jacobsson L T H. Validity of ankylosing spondylitis and undifferentiated spondyloarthritis diagnoses in the Swedish National Patient Register. *Scandinavian Journal of Rheumatology*, 2015.
- II. Exarchou S, Lindström U, Askling J, Eriksson J K, Forsblad-d'Elia H, Neovius M, Turesson C, Kristensen L E, Jacobsson L T H. The prevalence of clinically diagnosed ankylosing spondylitis and its clinical manifestations: a nationwide register study. *Arthritis Research and Therapy*, 2015.
- III. Lindström U, Bremander A, Haglund E, Bergman S, Petersson I F, Jacobsson L T H. Back pain and health status in patients with clinically diagnosed ankylosing spondylitis, psoriatic arthritis and other spondyloarthritis: a cross-sectional population-based study. *BMC Musculoskeletal Disorders*, 2016.
- IV. Lindström U, Forsblad-d'Elia H, Askling J, Kristensen L E, Lie E, Exarchou S, Jacobsson L T H. Perinatal characteristics, older siblings, and risk of ankylosing spondylitis: a case-control study based on national registers. *Arthritis Research and Therapy*, 2016.
- V. Lindström U, Exarchou S, Lie E, Dehlin M, Forsblad-d'Elia H, Askling J, Jacobsson L T H. Childhood hospitalisation with infections and later development of ankylosing spondylitis: a national case-control study. *Arthritis Research and Therapy*, 2016.

**SAHLGRENKA AKADEMIN
INSTITUTIONEN FÖR MEDICIN**



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Abstract

The objectives of this thesis were to assess the validity of the diagnostic codes for ankylosing spondylitis and undifferentiated spondyloarthritis in the national patient register (study I), and to estimate the prevalence of ankylosing spondylitis in Sweden, as well as to compare the prevalence according to geographic and demographic factors (study II). Further, to compare inflammatory back pain, and perceived health, in different subtypes of spondyloarthritis (study III), and to investigate predictive associations between perinatal characteristics, and childhood infections, with later development of ankylosing spondylitis (study IV and V).

The diagnoses in the register, were found to have a high validity. The point-prevalence of ankylosing spondylitis in Sweden, in 2009, was estimated to be 0.18%, with a higher prevalence associated with a shorter formal education, and a higher prevalence in northern Sweden compared to the southern parts. Current inflammatory back pain was common across the three subtypes of spondyloarthritis analyzed (43% of ankylosing spondylitis, 31% of psoriatic arthritis and 39% of other spondyloarthritis) and the groups reported similar levels of perceived health. Having older siblings (odds ratio[OR]: 1.23; 95% confidence interval[CI]: 1.09-1.39), and hospitalization with respiratory tract infections during childhood (OR: 1.24; 95% CI: 1.07-1.44), were associated with an increased risk for development of ankylosing spondylitis, and appendicitis with a decreased risk (OR: 0.59; 95%CI: 0.41-0.83).

In conclusion, axial spondyloarthritis is a significant health issue, and early life exposures appear to be associated with the disease development.

Keywords: axial spondyloarthritis, ankylosing spondylitis, epidemiology