



Smoking and associated factors in patients with axial SpA*

Ann Bremander, PT, PhD^{1,2,3}, Ingemar F Petersson, MD, PhD^{2,4}, Stefan Bergman, MD, PhD^{1,2}, Emma Haglund, PT, MSc^{1,2}, Lennart TH Jacobsson, MD, PhD^{5,6}

INTRODUCTION

In subjects with early axial spondyloarthritis (SpA) smoking has recently been associated with earlier onset of disease, worse lesions of the sacroiliac joints and in later stages syndesmophyte progression¹.

AIM

To study associations of smoking habits with self-reported information in a large population based cohort of patients with axial SpA.

PATIENTS AND METHODS

A cross-sectional questionnaire survey performed in 2009 included all health care seeking subjects aged ≥18 years with a diagnosis of SpA according to ICD 10 codes identified by a regional health care register (n=3711). Questionnaire response rate was 76% whereof 2167 (58%) returned the questionnaire and 18% declined participation in the study.

Smoking habits were studied in patients with ankylosing spondylitis (AS, ICD M45) and in patients who fulfilled criteria for "non AS axial SpA" (*without* having one of AS). Criteria for non AS axial SpA were based on data from the questionnaire: pain for 3 months or more during the last 12 months together with 2 or more features out of 5 (inflammatory back pain, history of psoriasis, uveitis/tendinitis, inflammatory bowel disease or heredity).

The questionnaire included data on smoking (never smokers vs. ever smokers), disease activity (BASDAI) physical function (BASFI), general health (BAS-G) all measured with numerical rating scales 0-10 (best to worst), health related quality of life (EQ-5D, 0-1 worst to best), pain, fatigue (numerical rating scales 0-10 best to worst) and number of painful areas noted on a pain mannequin (Pain-A, 0-16 best to worst). Linear regression analysis with parameter estimates (β) was performed and all data were controlled for sex and age.

RESULTS

The AS group (n=598)

- mean age 54 (SD14) years
- 35% were women
- 48% were never smokers

Ever smokers had worse scores in many studied variables compared with never smokers:

- BASDAI β 0.60 (95% CI 0.21 ; 1.00)
- BASFI β 0.51 (95% CI 0.11 ; 0.91)
- Fatigue β 0.51 (95% CI 0.06 ; 1.00)

There was a tendency to worse scores for ever smokers also in EQ-5D:

- EQ-5D β -0.04 (95% CI -0.09 ; -0.001)

RESULTS

The non AS axial SpA group (n=572)

- mean age 55 (SD 14) years
- 68% were women
- 38% were never smokers

Also in the non AS axial SpA group ever smokers had worse self-reported scores compared with never smokers:

- BASDAI β 0.59 (95% CI 0.23 ; 0.94)
- BASFI β 0.59 (95% CI 0.17 ; 1.00)
- Pain β 0.45 (95% CI 0.08 ; 0.82)
- Fatigue β 0.43 (95% CI 0.03 ; 0.83)
- EQ-5D β -0.06 (95% CI -0.11 ; -0.002)
- Pain-A* β 0.73 (95% CI 0.06 ; 1.46)

*Number of painful areas

Table. Subject descriptive as never smokers vs. ever smokers, N 1170.

	AS		non AS axial SpA	
	Never smokers mean (SD)	Ever smokers mean (SD)	Never smokers mean (SD)	Ever smokers mean (SD)
Age, yrs	51 (15)	57 (12)	51 (14)	57 (13)
BASDAI	3.6 (2.2)	4.3 (2.2)	5.1 (2.0)	5.7 (1.9)
BASFI	2.9 (2.5)	3.8 (2.5)	3.9 (2.5)	4.8 (2.5)
BAS-G	3.3 (2.5)	3.8 (2.7)	5.0 (2.5)	5.4 (2.2)
EQ-5D	0.69 (0.25)	0.64 (0.26)	0.58 (0.27)	0.52 (0.30)
Pain	3.5 (2.4)	3.9 (2.5)	5.1 (2.3)	5.7 (2.1)
Fatigue	4.1 (2.7)	4.7 (2.8)	5.8 (2.5)	6.2 (2.2)
Pain-A	6.2 (3.7)	6.7 (3.8)	8.66 (4.1)	9.6 (4.3)

CONCLUSION

Patients with AS and non AS axial SpA who were ever smokers reported worse clinical features compared with never smokers.

Further longitudinal studies are needed to better understand cause and effect.

Smoking cessation should be recommended not only due to general health perspectives but also due to disease specific issues.



REFERENCES

- 1 Smokers in early axial spondyloarthritis have earlier disease onset, more disease activity, inflammation and damage, and poorer function and health-related quality of life: results from the DESIR cohort. Chung HY, Machado P, van der Heijde D, D'Agostino MA, Dougados M. Ann Rheum Dis. 2012 Jun;71(6):809-16.

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*Smoking is associated with worse and more widespread pain, worse disease activity, function, fatigue and health related quality of life in patients with axial SpA –Results from a population based cohort

¹Research and Development Centre, Spenshult, Halmstad, Sweden, ²Dept. of Clinical Sciences, Lund, Section of Rheumatology, Lund University, Lund Sweden, ³School of Business and Engineering, Dept. of Exercise Physiology, Biomechanics and Health, Halmstad University, Halmstad, Sweden, ⁴Musculoskeletal Sciences, Dept. of Orthopedics, Clinical Sciences Lund, Lund University, Lund, Sweden, ⁵Section of Rheumatology & Inst. of Clinical Sciences Malmö, Lund University, Lund, Sweden, ⁶Dept. of Rheumatology & Inflammation Research, Inst. of medicine, The Sahlgrenska Academy, University of Gothenburg, Sweden

