to biological treatment. CT can be considered as a useful biomarker of inflammation and predictor of response to treatment in AS.

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AB0727

WORK OUTCOMES AND ASSOCIATED FACTORS IN ANKYLOSING SPONDYLITIS PATIENTS IN CHINA

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Background: Poorer work productivity due to pain and functional impairment is commonly seen in ankylosing spondylitis (AS) patients, which may contribute to huge social economic burden. However, data about work outcomes and associated factors in Chinese AS patients were barely reported.

Objectives: To assess work outcomes and identify factors associated with poor work productivity in patients with AS in China.

Methods: A cross-sectional study was conducted in China. Adult patients (aged ≥ 18 years) fulfilled the 1984 New York modified criteria of AS were enrolled from rheumatology center from Jan 2017 to Aug 2017. All participants completed questionnaires about socio-demographic characteristics, disease characteristics, quality of life and the Work productivity and activity impairment questionnaire in AS (WPAI:SpA) to assesses the impact of chronic health conditions on job performance and productivity. Factors associated with work outcomes were evaluated.

Results: A total of 91 patients with AS were included: 87.8% males, 78.02% employed, mean age and disease duration of 30 and 10 years respectively. The mean (SD) activity impairment of all patients was 48.57% (22.02%). For patients with employed work, mean (SD) absenteeism, presenteeism and work productivity loss were 10.22% (19.44%), 43.86% (22.48%) and 47.92% (25.81%) respectively. In multivariable analysis, activity impairment was associated with Bath Ankylosing Spondylitis Functional Index (BASFI) ($P<0.01$) and Ankylosing Spondylitis Quality of Life (ASQoL) ($P<0.01$). Absenteeism was associated with disease duration ($P=0.03$). Presenteeism was associated with disease duration ($P=0.04$), BASFI ($P<0.01$) and ASQoL ($P<0.01$). Work productivity loss was associated with BASFI ($P<0.01$) and ASQoL ($P<0.01$).

Conclusion: Longer disease duration, reduced physical function and poorer quality of life are associated with reduced work productivity in Chinese AS patients.

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AB0728

MICROVASCULAR CHANGES OF THE RETINA IN ANKYLOSING SPONDYLITIS, AND THE ASSOCIATION WITH CARDIOVASCULAR DISEASE – THE EYE FOR A HEART STUDY.

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Background: Patients with ankylosing spondylitis (AS) have an increased risk at cardiovascular disease (CVD). Microvasculature changes might precede overt CVD, but have been poorly studied in AS. The small vessels of the retina are accessible for non-invasive visualization, and microvascular changes (retinal arteriolar narrowing, venular widening, loss of tortuosity) are described in association with CVD in other diseases.

Objectives: The aim of this study was to compare the retinal microvasculature of AS patients with healthy controls, and to assess gender differences.

Methods: A cross-sectional, case-control study comparing AS patients (fulfilling the modified New York criteria, Rheumatology outpatient clinic of Reade and Amsterdam UMC) with healthy controls (EMIF-AD PreClinAD cohort of the Dutch Twins Register(1)), men:women=1:1. Most important inclusion criteria were: age 50-75 years, diabetes mellitus was excluded. All subjects underwent Optical Coherence Tomography Angiography and fundus photography (≥ 1 eye), analyzed with Singapore I Vessel Assessment software (Table 2). Differences between AS and controls were evaluated with generalised estimating equations (GEE), adjusted for demographics and cardiovascular risk, and stratified for gender.

Results: In total, 59 AS patients (mean disease duration 36 years) and 105 controls were included. Controls were significantly older than patients, but did not differ in cardiovascular profile (Table 1). Patients had a significantly lower retinal arteriolar tortuosity (β -0.1; $p=0.02$), and higher vessel density (β 0.5, $p=0.02$), than controls (Table 2). Also, male AS patients showed a lower arteriovenular ratio compared to male controls (β -0.03, $p=0.04$). There were no differences between women with and without AS. In AS, a high disease activity was associated with a wider (unfavorable) venular diameter ($p=0.05$), whereas biologic use showed a wider (more favorable) arteriolar diameter ($p<0.01$).

Conclusion: This study detected several retinal microvascular changes, in AS patients compared to controls, of which some are associated with CVD based on previous studies. Some changes were only observed in male-, but not in female, patients. A new finding was an increased capillary density in AS, of which the association with CVD-risk has not yet been studied before.

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Table 1. Patient characteristics AS (n=57) and controls (n=105)

	AS	Controls	p
Gender, women (%)	30 (51)	52 (50)	ns
Age, mean yrs (SD)	60 (6)	68 (4)	<0.01
Smoking currently, yes (%)	11 (19)	8 (8)	0.06
Body mass index, mean (SD)	26 (4)	26 (3)	ns
Hypertension, yes (%)	23 (39)	39 (37)	ns
Dyslipidemia, yes (%)	9 (15)	18 (17)	ns
Cardiovascular disease history, yes (%)	9 (15)	15 (14)	ns
NSAIDs (%)	24 (41)	6 (6)	<0.01
Biological (mostly TNF inhibitor)* (%)	29 (49)	0 (0)	<0.01
AS Disease Activity Score, mean (SD)	2.1 $\pm$ 0.9		

Table 2. Retinal vascular parameters, differences AS and Control subjects

Retinal vascular parameters	Crude			Adjusted for: Age, gender, BMI smoking, hypertension, dyslipidemia		
	β	(95%CI)	p	β	(95%CI)	p
Diameter						
Arteriolar	1.6	(-2.0, 5.2)	0.37	-0.2	(-4.8, 4.4)	0.92
Venular	5.4	(-0.66, 11.5)	0.08	2.5	(-5.4, 10.4)	0.53
Arteriovenular ratio	-0.01	(-0.03, 0.01)	0.43	-0.01	(-0.03, 0.02)	0.65
Tortuosity	-0.05	(-0.12, 0.03)	0.19	-0.1	(-0.2, -0.01)	0.02
Complexity	0.01	(0.00, 0.03)	0.04	0.0	(-0.02, 0.02)	0.88
dimension						
Vessel Inner ring	0.8	(0.5, 1.1)	<0.001	0.5	(0.1, 0.9)	0.02
Density Outer ring	0.7	(0.4, 1.0)	<0.001	0.2	(-0.2, 0.6)	0.42

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