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THE ASSOCIATION BETWEEN EDUCATION AND LIFESTYLE HABITS IN THE OCCURRENCE OF EXTRA-ARTICULAR MANIFESTATIONS AND COMORBIDITIES IN PATIENTS WITH RHEUMATOID ARTHRITIS

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BACKGROUND

Rheumatoid arthritis (RA) is a chronic inflammatory autoimmune disease with systemic consequences. Extra-articular manifestations and comorbidities are common in this population and are related to worse outcomes of morbidity and mortality.

MATERIALS AND METHODS

This is a cross-sectional study with the objective of analyzing the association between education and lifestyle habits in the occurrence of extra-articular manifestations and comorbidities in patients with RA. The data of 1116 Brazilian patients were extracted from the REAL multicenter database and analyzed with a measure of association represented by the prevalence ratio (PR) and p-value at the 5% significance level.

RESULTS

This study in RA patients shows the presence of extra-articular manifestations in 20.9% and comorbidities in 76.7%. Subcutaneous nodules (8.2%), secondary Sjögren's syndrome (5.8%), systemic arterial hypertension (49.9%), dyslipidemia (32.5%), osteoporosis (26.0%), diabetes mellitus (14.9%) and fibromyalgia (13.8%) were more common. Extra-articular manifestations and comorbidities were associated with long-term disease (prevalence ratio, PR: 1.985; $p < 0.001$ and PR: 1.376; $p < 0.001$) and erosive disease (PR: 2.027; $p < 0.001$ and PR: 1.127; $p < 0.001$). Smoking was related to diabetes mellitus (PR: 1.424; $p = 0.001$) and subcutaneous nodule (PR: 1.744; $p = 0.004$) (Table 1), as well as low education increased the chance of comorbidities analyzed together (PR: 1.334; $p < 0.001$) (Table 2), DM (PR: 1.617; $p = 0.046$) and dyslipidemia (PR: 1.702; $p < 0.001$).

Table 1. Association between educational level and comorbidities.

Educational level	Comorbidities		PR	CI 95%	P value
	Yes n (%)	No n (%)			
0–4 years*	250 (86.4)	41 (13.6)	1.334	(1.173-1.519)	< 0.001
5–11 years*	502 (75.0)	167 (25.0)	1.165	(1.025-1.325)	0.008
≥ 12 years*	94 (64.4)	52 (35.6)	1		

*Years of schooling.

Table 2. Association between smoking, subcutaneous nodule and diabetes mellitus.

Smoking	Subcutaneous nodule		PR	CI 95%	P value
	Yes n (%)	No n (%)			
Never	43 (6.4)	632 (93.6)	1		
Past or current	49 (11.1)	392 (88.9)	1.744	(1.179–2.580)	0.004
Diabetes mellitus					
Never	86 (12.7)	589 (87.3)	1		
Past or current	80 (18.1)	361 (81.9)	1.424	(1.076–1.883)	0.001

CONCLUSION

Extra-articular manifestations and comorbidities are common in patients with RA and most common in smokers, individuals with low education and who have long-term erosive disease. Therefore, a broader treatment in RA is needed, with a focus on patient education and cessation of life habits that are harmful to the disease, especially smoking.

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