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PREVALENCE OF PERICARDIAL INVOLVEMENT IN SYSTEMIC SCLEROSIS

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BACKGROUND

Cardiac involvement is one of the most complex internal organ involvements in systemic sclerosis (SSc) because of the associated high mortality rate. The objective of the present study was to describe the prevalence of pericardial effusion in patients with SSc based on echocardiographic study and to report the main demographic, clinical, and immunologic features of these patients.

MATERIALS AND METHODS

Patients diagnosed with SSc based on ACR classification criteria and followed at a university center were included in this study. Medical records from January 2017 to August 2020 were analyzed. Data collection included clinical, laboratory, and echocardiographic findings. Patients with overlap syndromes or with other causes of pericardial disease were excluded. Statistical analysis was performed using the Statistical Package for the Social Sciences software (version 21; IBM SPSS, Armonk, NY, USA), and results expressed in proportions or mean $\pm$ standard deviation (or median and range). Ethical approval was not necessary.

RESULTS

A total of 90 patients with SSc was evaluated. Seventy-nine (88%) were female, 54 (60%) had limited cutaneous SSc (lcSSc) and the mean age was 52.4 years, SD $\pm$ 13.7. Nineteen (21.1%) had pericardial effusion. It was mild, moderate, and severe in 13, 2, and 4 patients, respectively. In 15 it was asymptomatic, and the remaining had dyspnea, chest pain, and jugular venous distension. Prednisone 20 mg/day was used in one patient, unsuccessfully. Pericardiocentesis was performed in one patient and open surgical procedure in four, with severe effusion. Demographic, clinical, and laboratory characteristics of the whole cohort are presented in Table 1. Clinical and echocardiographic findings of those with pericardial effusion are presented in Table 2.

Table 1. Demographic, clinical, and laboratory characteristics of the whole cohort

	Entire cohort, N = 90 (%)	Present pericardial effusion, N = 19 (%)	Absent pericardial effusion, N = 71 (%)	P value
Demographics				
Sex (female)	79 (88)	18 (95)	61 (86)	0,303
Mean age $\pm$ SD	52.4 $\pm$ 13.7	51.6 $\pm$ 9.7	52.6 $\pm$ 14.6	0,391
Type of scleroderma				
Diffuse cutaneous SSc	36 (40)	7 (37)	29 (41)	0,750
Limited cutaneous SSc	54 (60)	12 (63)	42 (59)	0,750
Clinical features				
Raynaud's phenomenon	82 (91)	18 (95)	64 (90)	0,530
Esophageal involvement	84 (93)	19 (100)	65 (92)	0,188
Interstitial lung disease	56 (62)	10 (53)	46 (65)	0,330
Digital ulcers	40 (44)	9 (47)	31 (43)	0,771
Calcinosis	9 (10)	2 (10)	7 (10)	0,928
Pulmonary hypertension	31 (34)	9 (47)	22 (31)	0,181
Immunological characteristics				
Antinuclear antibody (n = 46)	42/46 (91)	11/12 (92)	31/34 (91)	0,957
Anti-topoisomerase I antibody (n = 27)	11/27 (41)	1/5 (20)	10/22 (45)	0,295
Anticentromere antibody (n = 46)	10/46 (22)	4/12 (33)	6/34 (18)	0,256

Table 2. Clinical and echocardiographic findings in systemic sclerosis patients with pericardial effusion

Degree of pericardial effusion (n=19)	
Severe	4 (21)
Moderate	2 (10)
Mild	13 (63)
Clinical features related to pericardial effusion (n=19)	
Dyspnoea	4 (21)
Chest pain	4 (21)
Jugular venous distension	4 (21)
Asymptomatic	15 (79)

CONCLUSION

In this study, the prevalence of pericardial effusion was 21%. However, in only 4.4%, it was of clinical significance. It is in accordance with those figures observed in the literature.