OBJECTIVE: To investigate the prevalence and epidemiologic characteristics of seronegative spondyloarthritis (SpAs) in Chinese army force in different areas.

METHODS: 4-phase survey was conducted in 21,750 Chinese army, including: face-to-face interviews with standardized COPCORD questionnaires (Phase I screening); further examination on the suspected cases; identification of inflammatory joint and spinal diseases (Phase II); identification of SpAs (AS and uSpA) by more than two experienced specialists in rheumatology; further examination with X-rays and laboratory detection of HLA-B27 (Phase III); and data analysis (Phase IV).

RESULTS: Among 21,750 army men, 21 cases of RA, 106 cases of SpAs were identified, with prevalence rates of 0.966 per thousand, 4.87 per thousand respectively. In 106 cases of SpAs, there were 46 cases of ankylosing spondylitis (AS), 52 cases of undifferentiated SpAs (uSpAs) with the prevalence rates of 2.11 per thousand and 2.39 per thousand respectively. Few cases of reactive arthritis (ReA) and Reiter's syndrome (RS) were identified (6 and 1 cases respectively). The prevalence of AS, uSpAs were higher in navy than that in the ground force or the air force. Soldiers in cold and damp areas had higher prevalence rates than that in the plain and drought areas.

CONCLUSION: The prevalence of SpA (especially AS and uSpA) in Chinese army force was similar to that in the civilians. SpA (AS and uSpA) was more prevalent seen in the Navy. The incidence of SpA (AS and uSpA) was influenced by environmental factors such as coldness and dampness.