INITIAL PREDICTORS FOR MORTALITY IN PATIENTS WITH CANCER-ASSOCIATED MYOSITIS: A MULTICENTER RETROSPECTIVE COHORT IN JAPAN

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Background: Concomitant malignancy is one of the prognostic factors in patients with myositis, but clinical parameters for mortality still remain unknown in patients with cancer-associated myositis (CAM).

Objectives: Initial predictors of mortality were examined using a multicenter cohort of CAM patients.

Methods: This retrospective study enrolled 67 consecutive patients diagnosed as having CAM in 3 referral hospitals between 1995 and 2017. Clinical data at diagnosis of myositis as well as treatment regimens and outcomes of myositis and malignancy were collected by review of medical charts. Myositis-specific autoantibodies (MSAs) were comprehensively detected using RNA immunoprecipitation (IP), enzyme-linked immunosorbent assay, and IP-immunoblotting. We initially diagnosed the lung disease in early and mild SSc-ILD but was effective in controlling skin disease and was well tolerated.

Results: The median age at diagnosis of myositis was 63 years, and 62% were female. MSAs were detected in 47 patients: anti-TIF1-γ in 27, anti-ARS in 6, anti-ADAM9 in 5, anti-Mi-2 in 3, anti-NXP2 in 3, anti-SAE1 in 2, and anti-SRP1 in 1. During the median observation period of 2 years, 19 (28%) of 67 CAM patients were dead due to tumour in 16, ILD in 1, and an unknown cause in 2. The univariate analysis identified significant poor prognostic factors (p≤0.1) as follows: male at diagnosis of myositis (p=0.08), longer period between diagnosis of myositis and tumour (p=0.07), absence of breast cancer (p=0.001), malignancy stage III/IV (p=0.006). In multivariate analysis, male (HR 8.1, 95% CI 2.6–25.2; p=0.001) and malignancy stage III/IV (HR 12.1, 95% CI 3.3–44.9; p=0.001) were identified as independent risk factors for mortality in the Model 1, and identical variables were identified in the Models 2 and 3. Cumulative survival rates of patients with 0, 1, or 2 risk factors were 100%, 93%, and 69% at 1 year, and 100%, 82%, and 0% at 3 years, respectively. Cumulative survival rates were statistically different between the groups stratified by the number of risk factors (figure 1).

Conclusions: Male and progression of malignancy at diagnosis of myositis were identified as predictors of survivals in CAM patients.


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