Clinical Pathological Analysis of 20 Cases of Subcutaneous Sarcoidosis in South Korea

Moon Shin Hang1, Eun Jung Park2, Jinseok Kim3
Department of Medicine, Jeju National University Hospital, Jeju University School of Medicine

**Background:** Sarcoidosis is a multisystemic granulomatous disorder of uncertain etiology, which is rare in Asia. The aim of study was to evaluate the clinicopathological features of 20 patients with subcutaneous sarcoidosis and their relationship with systemic involvement of the disease according to subtype.

**Methods:** Data of all patients at Jeju National University Hospital between 2003 and 2013 who were diagnosed with subcutaneous sarcoidosis and performed skin biopsy were included and retrospectively reviewed.

**Results:** Twenty patients with subcutaneous sarcoidosis were observed. Mean age at diagnosis was 19.9 years and mean follow-up duration was 1.7 years. Female were dominant (17 patients, 85.0%). Seventeen (85.0%) of 20 patients were demonstrated specific subcutaneous sarcoidosis. Subcutaneous lesions were most frequently located in the extremities and most of these lesions appeared at the beginning of the disease. Four (20.0%) patients demonstrated only specific cutaneous involvement during the follow-up period and the remaining patients presented systemic involvement which included 14 hilar and mediastinal lymphadenopathy with or without lung parenchymal lesion, 3 arthritis, 2 uveitis, or 1 splenic involvement. Serum angiotensin-converting enzyme level and ESR in patients with systemic involvement tended to be higher than those without, although there was no statistical significance. Subtype of subcutaneous sarcoidosis was not related to systemic involvement. Fifteen (75.0%) patients were treated with glucocorticoid and 8 patients were treated with combination with hydroxychloroquine or colchicine. Three patients presented with relapse with long involvement and were treated with oral steroid with azathioprine, which resulted in partial remission.

**Conclusions:** Subcutaneous sarcoidosis may present with non-severe systemic involvement and shows favorable clinical outcome. Specific subcutaneous sarcoidosis is a quite uniform clinicopathological entity usually appearing at the beginning of the disease and was not related to systemic involvement.

Diagnostic Accuracies of Procalcitonin and CRP for Bacterial Infection in Patients with Systemic Rheumatic Diseases: A Meta-Analysis

Jae Hun Jung1, Young Ho Lee1
Korea University Anam Hospital,Internal Medicine

**Background:** The purpose of this study was to compare the diagnostic performance of procalcitonin and C-reactive protein (CRP) for bacterial infection in patients with systemic rheumatic diseases.

**Methods:** We searched Medline, Embase, and the Cochran library, and performed two meta-analyses on the diagnostic accuracy of procalcitonin and CRP for bacterial infection in systemic rheumatic disease patients.

**Results:** A total of eight studies including 668 patients in whom the patients with bacterial infection were 208 available for the meta-analysis. The pooled sensitivity and specificity of procalcitonin were 66.8% (95% confidence interval [CI] 60.0–73.2) and 89.8% (86.8–92.4), respectively, and those of CRP were 81.3% (75.3–86.3) and 63.0% (58.5–67.5). Procalcitonin PLR, NLR, and DOR were 5.930 (3.593–9.786), 0.352 (0.229–0.539), and 19.33 (10.25–36.45), respectively, and those for CRP were 2.228 (1.376–3.608), 0.367 (0.252–0.534), and 7.066 (3.559–14.03), respectively. The AUC of procalcitonin was 0.884 and the Q* index was 0.814, while the AUC of CRP was 0.789 and the Q* index was 0.726, which indicated that the diagnostic accuracy of procalcitonin in patients with systemic rheumatic diseases is higher than that of CRP (difference of AUC 0.095, 95% CI 0.004–0.185, p = 0.039). When the data were limited to SLE, the specificity of procalcitonin was also significantly higher than that of CRP (difference 0.219, 95% CI 0.127–0.310, p < 0.0001).

**Conclusions:** Our meta-analysis of published studies demonstrates that procalcitonin is more specific and has better diagnostic accuracy than CRP for bacterial infection in systemic rheumatic diseases.

Case Report: Intramural Hematoma of Aorta in Relapsing Polychondritis

Ji Yeon Ahn1, Sang Hoon Lee1, Hyung In Yang1, Ran Song2
Kyunghee University Hospital at Gangdong, Korea, Department of Medicine, Graduated School, Kyung Hee University, Korea

Relapsing polychondritis is a rare multisystemic disease of unknown etiology that involves the cartilage and other proteoglycan-rich structures, such as the eye, ear, heart, and blood vessels. Occasionally, there are cardiovascular manifestations of this disease. Cardiovascular complications include aortic and mitral regurgitation, aortic aneurysm, aortic dissection, myocarditis, pericarditis, atrioventricular block, and systemic vasculitis. But there was no case of intramural hematoma. There are no reports that intramural hematoma of aorta can be a cardiac complication of relapsing polychondritis. This case report demonstrates that intramural hematoma of aorta can be the features of cardiac involvement in relapsing polychondritis. A 70-year-old man with relapsing polychondritis presented with six months of exertional dyspnea. Imaging studies revealed intramural hematoma of aorta but without either aortic valve involvement or aortic dissection. He was started oral anticoagulation therapy. Intramural hematoma is thought to begin with rupture of the vasa vasorum of the aortic wall. A rupture of the vasa vasorum may be developed by the vasculitis that occurs in 11–56% of patients with relapsing polychondritis. This case shows that when the possibility of intramural hematoma with no acute symptom is raised, a careful history and examination and the physician's close observation are essential.

Ethanol Extract of Cordyceps Militaris Enhances Cell Mediated Immunity in Healthy Korean Men

Hojoon Kang1, Hyun Wook Baik2
Department of Internal Medicine, Bundang Jesaeng Hospital, Korea

**Background:** Cordyceps militaris is a mushroom traditionally used for diverse pharmaceutical purposes in East Asia, including China, and has been found to be effective in enhancing immunity by various types of animal testing. This study aimed to determine the efficacy of C. militaris in enhancing cell mediated immunity and its safety in healthy male adults.

**Methods:** Healthy male adults were divided into the experimental group (n=39) and the control group (n=40); then, the former was given 1.5g/day of the ethanol extract of C. militaris and the latter was given the same volume of placebo for four weeks from February 13 to March 14, 2012 and NK cell activity, the lymphocyte proliferation index (PI), and the Th1 cytokine cluster (IFN-γ, IL-12, IL-2, TNF-α) were measured, along with stability test, at 0th, 2nd, and 4th week.

**Results:** The C. militaris extract group saw a statistically significantly greater increase in all of NK200 (p=0.0010), lymphocyte PI (p=<0.0001), IL-2 (p=0.0006), and IFN-γ (p=0.0126), as compared with the basal level, than the placebo group. There was no statistically significant adverse reaction.

**Conclusions:** The C. militaris extract enhances NK cell activity and lymphocyte proliferation and partially increases Th1 cytokine secretion. Therefore, C. militaris is effective in enhancing cell-mediated immunity of healthy male adults.