

Validation of the Korean version of ECRHS questionnaire for adult epidemiologic study for asthma

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Introduction: The European Community Respiratory Health Survey (ECRHS) questionnaire was developed to investigate the epidemiology of asthma in general adult population, and has been widely used in various countries. However, the questionnaire has not been validated for Korean. **Objective:** The present study aimed to investigate the reliability and validity of the Korean version of the ECRHS questionnaire. **Methods:** The screening questionnaire from ECRHS phase II survey was translated into Korean, according to the international criteria. The questionnaire was self-administered to study participants. Reliability was tested in 100 adult asthma patients, recruited from 5 referral hospitals in Korea. Validity was examined for asthma-like symptom questions with regard to physician diagnosed asthma or methacholine airway hyper-responsiveness in asthmatics and controls recruited from hospital visitors or community populations. **Results:** The Korean version of the ECRHS questionnaire showed high internal consistency (Cronbach alpha=0.844), and good test-retest reliability (Cohen's kappa=0.71 to 1.00) between two weeks' intervals. Among asthma-like symptom question items, recent wheeze (Have you had wheezing or whistling in your chest at any time in the last 12 months?) showed sensitivity of 0.89 and specificity of 0.82 for physician diagnosed asthma. Nocturnal symptoms showed high specificity (0.94 to 0.98) and Youden's index of 0.66 to 0.71. With regard to methacholine airway hyper-responsiveness, recent wheeze had high specificity but low sensitivity in the control group. **Conclusions:** The present study suggests that the Korean version of the ECRHS questionnaire is a reliable tool for use in adult epidemiologic studies for asthma. Asthma-like symptom questions showed a good validity in physician diagnosed asthma patients. In control groups, the asthma-like symptom items showed high specificity, indicating its usefulness in epidemiologic studies for asthma risk factors.

Procalcitonin for the Differential Diagnosis between Acute Gouty Attack and Bacterial Infection

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Objectives: Acute gouty attack is an inflammatory condition secondary to a high concentration of uric acid. The features and laboratory findings in acute gouty attack are similar to those of infectious diseases. Moreover, there were many cases in which serum uric acid levels were not elevated in the acute gouty attack state, which made the differential diagnosis of acute gouty attack difficult. Procalcitonin is the precursor of calcitonin and increases in bacterial infection. We investigated whether procalcitonin levels are elevated in patients with acute gouty attack and the availability of those in differential diagnosis. **Methods:** This study included 41 patients with acute gouty attack and 75 age-matched patients with bacterial infection. The serum samples were obtained from patients during the clinically active inflammatory state. Their serum procalcitonin levels were measured by enzyme-linked fluorescent assay. **Results:** Patients with acute gouty attack had significantly lower serum procalcitonin levels than the patients with bacterial infection (0.078 ± 0.066 ng/mL vs 5.401 ± 14.982 ng/mL, $p=0.003$). However, there were no significant differences between these two groups in serum ESR, CRP levels and white blood cell counts. There was a larger number of patients in the acute gouty attack group who had serum procalcitonin levels greater than the reference range than in the bacterial infection group (11/41, 26.8% vs 63/76, 82.9%, $p<0.001$). Serum uric acid levels were statistically elevated in patients with acute gouty attack than those without it; however, the rate of patients whose serum uric acid levels were below 6.0 mg/dL was 22.0% (9/41) among the acute gouty attack group. **Conclusions:** Serum procalcitonin levels were lower in the acute gouty attack group than in the bacterial infection group. The serum procalcitonin level could be a useful serologic marker for the differential diagnosis between acute gouty attack and bacterial infection.