

Association Study of Candidate Genes for Knee Osteoarthritis in Korea

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Abstract: Purpose: Osteoarthritis (OA) is recognized to have a genetic component. We examined 4 single-nucleotide polymorphisms (SNPs) from candidate genes in OA susceptibility. **Methods:** The study was a part of the Korean cohort study, a prospective population based investigation of the determinants of chronic diseases. 2462 subjects aged 50 years and older which were assessed for OA at the knee were genotyped with 4 SNPs (LRCH1, GDF5, DVWA, and ADAM13) derived from the cohort. Of those, 725 subjects had radiographic OA (defined as a K/L score of ≥ 2). Genomic DNA was extracted from peripheral blood using a QIAamp DNA Blood Mini Kit (Qiagen, Valencia, CA), according to the manufacturer's protocol. Genotyping was performed using High Resolution Melt (HRM). Anteroposterior extended-view weight-bearing radiographs of the knees were obtained. Radiographs were read by an examiner who was blinded to the clinical information, using an atlas of radiographic features to obtain a global Kellgren/Lawrence (K/L) score (0-4 scale). Concomitant diseases or operations were also recorded. Genotype frequencies of the SNP were in Hardy-Weinberg equilibrium in all groups, according to chi-square tests. Allele frequencies were assessed by counting alleles. Associations were tested by calculating the odds ratios (ORs) and 95% confidence intervals (95% CIs), using logistic regression with adjustments for age, sex and body mass index (BMI). All analyses were performed using SPSS software (version 16; SPSS, Chicago, IL). **Results:** The mean age of the OA patients (Female; 554 subjects, 76.4%) was 67 years. Intraobserver agreement was high for identification of osteophytes (kappa; 0.80) and joint space narrowing (kappa; 0.70). No SNPs were associated with OA susceptibility (Table 1). **Conclusions:** 4 SNPs associations noted in previous studies were not found in the Korean OA cohort. These studies demonstrate the additional ethnic complexities when investigating the genetic basis of OA.

Clinical significance of anti-cyclic citrullinated peptide antibodies in primary Sjögren Syndrome

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Objective: Anti-cyclic citrullinated peptide antibody (anti-CCP Ab) is a specific marker for the diagnosis of rheumatoid arthritis. However, the antibody can be detected in other rheumatic diseases, including primary Sjögren syndrome (pSS). This study aims to determine the clinical significance of anti-CCP Ab in pSS patients. **Methods:** We analyzed the clinical and laboratory data of sixty nine patients with pSS by retrospective review of medical records. Anti-CCP Ab, rheumatoid factor (RF), other autoantibodies such as anti-Ro and anti-La were measured. The relationship between anti-CCP Ab with other serologic data and clinical profiles was analyzed. **Results:** Sixteen patients (23.2%) were positive in anti-CCP Ab and mean titer was 145.2 ± 85.2 U/mL. Fifty nine patients (85.5%) had arthralgia and 23 patients (33.3%) had non-erosive arthritis. Anti-CCP Ab was more frequently detected in patients who had non-erosive arthritis than in patients without arthritis (39.1% vs. 7%, $p=0.03$). Anti-CCP Ab positive patients had higher RF titers (102.9 vs. 62.7, $p=0.05$), lesser positive anti-nuclear antibody (25% vs. 60.7%, $p=0.02$), and more positive anti-Ro antibody (93.7% vs. 60.7%, $p=0.01$) than anti-CCP Ab negative patients. **Conclusion:** Anti-CCP Ab is more frequently detected in patients with pSS than previously reported (23.2%), which seems to be closely associated with non-erosive arthritis. Our results suggest that anti-CCP Ab could be useful as predictor of arthritis in patients with pSS.