Relationship between Achilles Tendon Thickness and Clinical Characteristics in Patients with Coronary Heart Disease

Background: Achilles tendon xanthoma (ATX) is frequently found in patients with familial hypercholesterolemia (FH) and patients with ATX have high risk of coronary heart disease (CHD). However, prevalence and clinical characteristics of CHD patients with ATX remain unclear. Methods: We analyzed relationship between Achilles tendon thickness (ATT) and clinical characteristics in consecutive 309 CHD patients admitted to our hospital between April 2016 and February 2018. ATT was measured using soft X-ray radiography. The patients who had ATT levels of 9 mm or more were regarded as ATX. Results: Mean age of patients was 68 years and 76.4% of patients were male. 31.1% of patients had acute coronary syndrome. Mean ATT was 6.8 mm, ATX was found in 10.4% of patients. Only 2.3% of patients satisfied the diagnostic criteria of FH. In ATX group, there were significantly higher lipoprotein (a) [Lp (a)] levels (30.2 mg/dl vs. 19.1 mg/dl, p=0.032) than non-ATX group. There was a significant positive correlation between LDL cholesterol levels and ATT (R=0.152, p=0.007), also between LP (a) levels and ATT (R=0.185, p=0.002). Conclusions: Patients with ATX showed worse metabolic profiles, which suggests that ATX would be useful for stratifying high risk CHD patients.