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SHC 37 . EVALUATION OF CYTOCHROME P450 2C19 ENZYME ACTIVITY IN PATIENT WITH ANKYLOSING SPONDYLITIS

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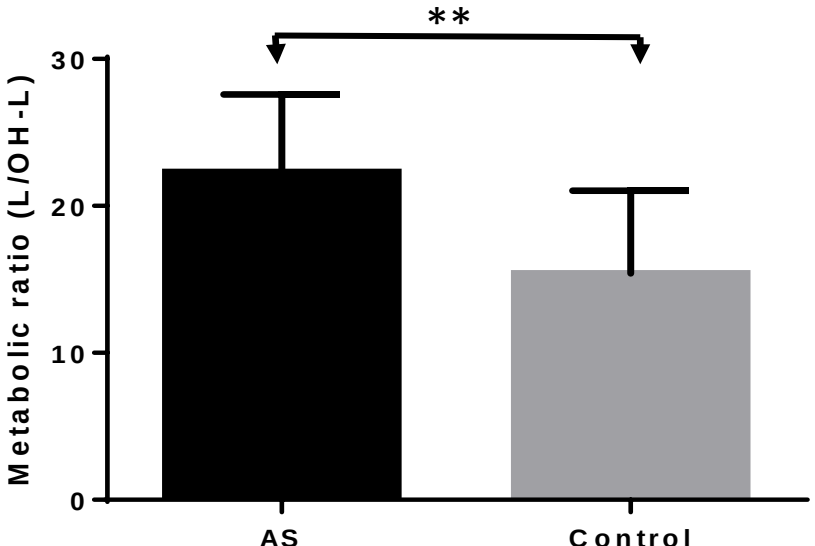
Ankylosing spondylitis (AS) is a chronic autoimmune disease which is characterized by the increase of the proinflammatory cytokines (TNF-α, IL-6, IL-17 and IL-23). Some studies have indicated that the enhanced levels of the proinflammatory cytokines at the same time downregulate cytochrome P450 enzymes. In a previous study, we found that CYP2C19 activity was lower in Behçet's patients compared to healthy volunteers. The purpose of this study was to determine the CYP2C19 enzyme activity in the Turkish ankylosing spondylitis (AS) patients and healthy volunteers.

Thirty-two AS patients (19 male, 13 female) and 51 healthy volunteers (31 male, 20 female) were recruited in the study. Three hours after a single oral dose of lansoprazole (30 mg), drug and its metabolite 5-hydroxy lansoprazole was determined by HPLC. Differences in metabolic rate of lansoprazole were compared with two-tailed Mann–Whitney U test.

The average of lansoprazole metabolic ratio (MR; lansoprazole/5-hydroxy lansoprazole) in AS patients was 1.4 fold higher as compared to the healthy volunteers group (p**= 0.006, median and 95% CI: 20.2 [17.2-27.3] and 10.1 [9.9-20.8], respectively).



CYP2C19 enzyme activity was significantly lower in the AS patients as compared to the healthy volunteers. The decrease CYP2C19 enzyme activity may be releated with the inceased production of the inflammatory cytokines in AS patients. This work supports the results that we obtained from patients with Behcet disease. These findings have significant inferences for the drug toxicity or unresponsiveness to treatment of CYP2C19 substrates in AS patients.

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