Introduction: Nonalcoholic fatty liver disease (NAFLD), extending from hepatic steatosis to cirrhosis, has become a worldwide challenge. Liver biopsy remains the single most reliable method to diagnose NAFLD and determine its severity. However, as patients with NAFLD require close follow-up, this invasive approach seems impractical. Therefore, designing a noninvasive system to follow up patients has become common interest in recent years.

Objectives: In this descriptive study, we intended to investigate the relationship between the platelet counts of NAFLD patients and the activity of their disease in terms of clinical, laboratory and ultrasonographic findings.

Methods and Materials: A total of 1,305 patients clinically diagnosed with NAFLD were enrolled in the study. In addition to obtaining the patients' history and performing a physical examination, the serum levels of liver enzymes, the platelet count, the lipid profile, and fasting blood glucose were measured. The ultrasonographic grade of fatty liver was also determined. The relevant information was acquired before administration of therapy.

Results: The mean age of our study population was 46.2 ± 0.3, and 54.3% (n = 708) were women. About 54.4% (n = 710) of our patients had the metabolic syndrome of which 68% (n = 483) were women. The mean platelet count was $25.6 \pm 0.1 \times 10^4/\mu L$. Patients with mild fatty liver on ultrasonography had lower platelet counts than those with moderate and severe fatty liver collectively. However, no sensitive and specific cutoff value to distinguish between them could be determined. We found no relationship between the platelet counts and the serum levels of liver enzymes. In our study, patients with metabolic syndrome had higher platelet counts than those without metabolic syndrome.

Conclusion: The platelet count in NAFLD patients can serve as a clue to the severity of NAFLD, but it cannot be relied on as the sole test to follow up patients.

Key words: Nonalcoholic fatty liver disease, Platelet