AIM: Being the most commonly used antipyretic and analgesic, paracetamol is one of the most common causes of childhood poisoning in the world and maintains its importance also in our country. Paracetamol poisoning is one of the most common causes of liver failure. This study aimed to investigate if pomegranate juice had protective effect in acute liver toxicity related with paracetamol. MATERIAL AND METHODS: A total of 36 Wistar-Albino rats were divided into four groups as the paracetamol group (3 000 mg/kg paracetamol), the pomegranate juice + paracetamol group (1.5 mL pomegranate juice plus 3 000 mg/kg paracetamol), the pomegranate juice group (1.5 mL pomegranate juice) and the control group (1.5 mL distilled water). Pomegranate juice and distilled water were administered for eight days. Paracetamol was administered on day 8. The level of thiobarbituric acid reactive substances, as an oxidative marker, was measured in the blood and liver tissue on day 9. In addition, liver tissues were evaluated histologically (in terms of increased connective tissue, granular degeneration, mononuclear cell infiltration, necrotic cells and vascular congestion). RESULTS: The liver tissue and blood thiobarbituric acid reactive substances levels were found to be significantly lower in the pomegranate juice + paracetamol group compared to the paracetamol group (p<0.05). Histologically, structural changes related with damage were observed in both the paracetamol group and pomegranate juice + paracetamol group. The extent of damage was statistically significantly lower in the pomegranate juice + paracetamol group (p<0.001). CONCLUSIONS: Our results related with oxidative and histologic evaluation showed that pomegranate juice might have a preventive effect in paracetamol-induced acute liver damage. KEYWORDS: Hepatotoxicity; paracetamol; pomegranate juice