

# Acute toxic hepatitis caused by inula viscosa (andız (yapiskan) herb): A case report

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## ABSTRACT

Acute toxic hepatitis may progress with inflammation and necrosis. Herbal products may also be a reason for this situation. Many people use plants for healing, but sometimes, these products can be toxic to the liver. Here, we presented the first case in the literature that developed toxic hepatitis due to the use of Inula Viscosa (Andız Herb).

**Keywords:** Toxic hepatitis, herbal drugs, Inula Viscosa

**A**cute toxic hepatitis usually develops acutely; it may progress with inflammation and necrosis. It can develop in autoimmune and ischemic conditions, as well as with viruses, some poisonous mushrooms, alcohol, and herbal products.<sup>1</sup> Many people have generally used officinal plants for healing since ancient times. Still, these products have side effects and toxic effects due to variables such as dosage and the way they are used on the liver sometimes.<sup>2</sup> In this article, we aimed to present the first case in the literature of acute toxic hepatitis due to the use of Inula Viscosa (IV).

## CASE

An 80-year-old female patient applied with shortness of breath and cough for 1 week. She said that within the first week, she drank a plant called Oath herb for her cough 4-5 times. The patient had heart failure, chronic renal failure, and Chronic Obstructive Pulmonary Disease already. In the physical examina-

tion, crackles and rhonchi were heard in the lungs. There was no defense and rebound in the abdomen but tenderness in the right upper quadrant. Vital importance in the application: Blood pressure:120/70 mmHg, pulse: 74, SpO<sub>2</sub>: 94, fever: 37,3 C. Laboratory examinations are in the table below (Table 1). Auto-antibodies and inflammation markers were requested to exclude autoimmune and viral hepatitis. Although, we thought that ischemic and toxic hepatitis coexisted with heart failure and IV side effects. However, the patient had heart failure for a long time. For this reason and the history of herbal products, we focus on toxic hepatitis more than ischemic hepatitis. The Abdomen Ultrasonography report was only hepatomegaly. The patient had a severe increase in blood values due to IV. The alanine aminotransferase / alkaline phosphatase ratio was calculated and found to be compatible with the type of hepatocellular damage. After seeing the blood results, we ordered the patient's hepatotoxic medications to be immediately discontinued, and the N-acetylcysteine (NAC) protocol was started. (150mg/kg N-Acetylcysteine (NAC) 5% in 500cc

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dextrose iv inf >1 hour, 50mg/kg N-Acetylcysteine (NAC) 5% 500cc dextrose iv inf 4 hours, 100mg/kg N-Acetylcysteine (NAC) 5% in 1000 cc of dextrose in 16 hours). After the treatment, the patient's blood results started to get normal. Also, Hepatitis B Virus (HBV), Hepatitis C Virus(HCV), Cytomegalovirus (CMV), Human Immune deficiency Virus(HIV) serology, and autoantibodies like Antinuclear Antibody(ANA), Anti Smooth Muscle Antibody(ASMA), Anti Liver Kidney microsomal Antibody-1(LKM-1) results were negative. Our diagnosis was supported by the improvement in the blood results and the negative autoantibodies and serologies.

## DISCUSSION

The liver is one of the very important organs in our body, and many chemical reactions occur and are metabolized there. Detoxifying toxic substances is also among its functions. With these features, it is one of the indispensable organs. As a result of its damage, significant disruptions occur in the body.<sup>3</sup> In our society, it is common to use plants as treatment and symptom relievers. Still, when factors that vary from person to person are added, these applications may produce different results for everyone.<sup>2</sup> Studies have shown that medicinal plants cause liver toxicity.<sup>4</sup> As in our case, in our patient who used IV upon recommendation, this plant had a toxic effect and caused deterioration in liver enzymes.

IV is a woody, hairy, glandular plant usually found on the Mediterranean coast. It reaches up to 150 cm in height, with abundant and upright branches. Its leaves are scattered, spiky flowers are 1-1,5 cm in diameter, golden yellow and showy.<sup>5</sup>

Although a study has shown that IV has an antioxidant effect on the liver<sup>6</sup>, liver toxicity should be kept in mind in patients with a history of using such plants.

### Conflict of Interest

The author(s) declared no potential conflicts of in-

terest with respect to the research, authorship, and/or publication of this article.

### Authors' Contribution

Study Conception: NK, AO; Study Design: AO, NK; Supervision; NK, AO; Funding: AO, NK; Materials: AO; Data Collection and/or Processing: NK; Analysis and/or Data Interpretation: NK, AO; Literature Review: NK, AO; Critical Review: AO, NK; Manuscript preparing: NK, AO.

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