

Toxic Medicinal Plants Used in Moroccan Traditional Medicine

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Abstract

Medicinal plants have been used for therapeutic purposes since ancient times. These plants are generally perceived as safe, but they could also be toxic. In this study, we reveal the toxic and potential toxic species used as medicines by Moroccan people in order to compile and document indigenous knowledge of those herbs. This study offers a thorough review of the toxicological profiles of herbal medicines through a bibliographic analysis of over 1,000 medicinal plants from Morocco. We identified 181 plant species with toxic properties, distributed across 70 families, with the Lamiaceae and Asteraceae families showing the highest diversity. Our results are summarized in two key tables: the first lists 48 plant species cited as toxic without experimental validation, while the second provides details on 133 species with confirmed toxicities and identified toxic compounds. Additionally, we investigated the compounds properties of 35 plants and identified 124 distinct toxic compounds. The study found that toxicity impacts multiple organ systems, with gastrointestinal, neurotoxic, renal, and hepatic effects being the most common. The review indicates the scientific name of the plant, the vernacular name, the part used, the LD50 (lethal dose 50). This research highlights the urgent need for rigorous toxicological studies to ensure the safety of herbal medicines and emphasizes the importance of ongoing vigilance in their use and development.

Keywords

Toxic Plants, Toxic Compounds, Toxicity, Traditional Medicine