

Ethnobotanical Study on the Usage of Toxic Plants in Traditional Medicine in the City Center of Tlemcen, Algeria

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Abstract : Traditional medicine has been part of the Algerian culture for decades. In particular, the city of Tlemcen still retains practices based on phytotherapy to the present day, as this kind of medicine fulfills the needs of its followers among the local population. The toxic plants contain diverse natural substances which supplied a lot of medicine in the pharmaceutical industry. In order to explore new medicinal sources among toxic plants, an ethnobotanical study was carried out on the use of these plants by the population, at Emir Abdelkader Square of the city of Tlemcen, a rather busy place with a high number of traditional health practitioners and herbalists. This is a descriptive and transversal study aimed at estimating the frequency of using toxic plants among the studied population, for a period of 4 months. The information was collected, using self-anonymous questionnaires, and analyzed by the IBM SPSS Statistics software used for statistical analysis. A sample of 200 people, including 120 women and 80 men, were interviewed. The mean age was 41 ± 16 years. Among those questioned, 83.5% used plants; 8% of them used toxic plants and 35% used plants that can be toxic under certain conditions. Some improvements were observed in 88% of the cases where toxic plants were used. 80 medicinal plants, belonging to 36 botanical families, were listed, identified and classified. The most frequent indications for these plants were for respiratory diseases in 64.7% of cases, and for digestive disorders in 51.5% of cases. 11% of these plants are toxic, 26% could be toxic under certain conditions. Among toxic plants, the most common ones are *Berberis vulgaris* with 5.4%, indicated in the treatment of uterine fibroids and thyroid, *Rhamnus alaternus* with 4.8% for hepatic jaundice, *Nerium oleander* with 3% for hemorrhoids, *Ruta chalepensis* with 1.2%, indicated for digestive disorders and dysmenorrhea, and *Viscum album* with 1.2%, indicated for respiratory diseases. The most common plants that could be toxic are *Mentha pulegium* (15.6%), *Eucalyptus globulus* (11.4%), and *Pimpinella anisum* (10.2%). This study revealed interesting results on the use of toxic plants, which are likely to serve as a basis for further ethno-pharmacological investigations in order to get new drug sources.

Keywords : ethnobotany, phytotherapy, Tlemcen, toxic plants

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