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Drug Interaction of Matricaria Recutita with Routine Chemical Drugs

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Abstract

Matricaria recutita (Chamomile) is one of the most important and oldest medicinal plants known to man in the world. The main origin and center of the gene pool of this plant is the Mediterranean region, especially Iran. The aim of this study was to investigate the drug interaction of chamomile with routine chemical drugs. Consumption of chamomile with anticoagulants, sedatives, drugs requiring GI absorption, and iron supplementations causes drug interactions+Concomitant use of chamomile with these chemicals should be used with caution to prevent drug interactions and side effects.

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Dear editor;

Matricaria recutita (synonym: *Matricaria chamomilla*), with common names chamomile or camomile is a plant of the Asteraceae family. *Matricaria recutita* is also known as German chamomile, Hungarian chamomile (kamilla), blue chamomile, or scented mayweed in other languages [1]. It is an annual herbaceous plant that can grow up to 20 to 80 cm in height. It grows around rivers, farms, gardens, roads and barren lands, and often in shady places. The stem is branched in this plant and the branches lead to flaps 1.5 to 2 cm in diameter. The leaves in the chamomile plant are narrow, long, and with leaf-like incisions. More than 120 phytochemical compounds including 36 flavonoids, 28 terpenoids, and 52 other compounds with potential pharmacological property have been identified in this plant as secondary metabolites [2-4]. It is widely distributed in Asia, Europe and the Americas. It has been reported in Iran in Zagros mountains, Lorestan, Khuzestan and Fars

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provinces, and sometimes in Tehran [5]. This plant has anti-inflammatory, anti-spasmodic, anti-flatulence, sedatives, and laxatives effects. It is also used to treat stomach ulcers, bacteria and fungi diseases, skin inflammations, pediatric fuel urine, and nipple cracks [6]. However, some studies have reported the drug interaction of this valuable plant with chemical drugs. We have reported some drug interactions with chamomile and their side effects. As shown in Table 1, chamomile has interactions with some chemical drugs.

Table 1. Drug interaction of Chamomile with chemical drugs

Plant	Interfering drug	Type of interference	Ref.
Plant name: *Matricaria recutita* Herbal family: Asteraceae	Anticoagulants (Warfarin and Aspirin)	Increased INR due to the presence of hydroxy coumarin compounds and binding to drugs that increase bleeding	[7, 8]
	Sedatives (Benzodiazepines)	Increase the sedative effect	[9, 11]
	Iron supplementations	Decreased iron absorption due to the presence of tannic acid compounds in *chamomile*	[7, 11]
	Drugs requiring GI absorption	Delay in drug absorption	[11]

As a result of reviewing studies, chamomile has been shown to cause drug interactions with chemical drugs. Despite the beneficial effects of this valuable herb, the use of this plant alone is very effective and efficient in the treatment of various diseases and disorders, but its use with other chemical drugs due to the occurrence of drug interactions requires caution in use.

Authors' contribution

All authors contributed equally to the manuscript.

Conflicts of interest

The authors declared no competing interests.

Ethical considerations

Ethical issues (including plagiarism, data fabrication, double publication and etc.) have been completely observed by author.

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