

MEDICINAL PLANTS

Matricaria chamomilla

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History

The *Matricaria chamomilla* has been used as a domestic remedy since early times. The wild plant is indigenous in England and the double variety which has risen as a result of cultivation was well known in Malta during the sixteenth century.

The name **Roman** was given to the Chamomille by the German physician Joachim (also known as Camerus). This name was given because of the abundance of the Chamomille in the neighbourhood of Rome. About the same period the German botanist Bock (also called Tragus) named the plant **Chamomille** from two Greek words meaning 'apple of the ground' since the plant grows close to the ground and has an odour which was thought to resemble that of the apples.

Pharmacology

Studies on the pharmacological actions of the *Matricaria chamomille* are not numerous. In the last 33 years the following studies appeared:

Janku, and C. Zita (1954)⁽¹⁾ observed some antihistaminic and antiphlogistic action on rats.

Studies conducted by M. Holub and V. Herout (1957)⁽²⁾ showed that the chamomille oil has some granulating and epithelizing action.

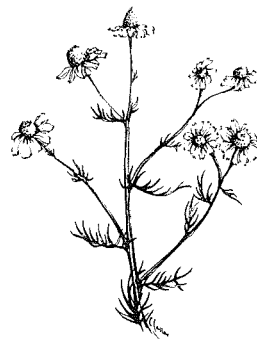
O. Isaak (1969)⁽³⁾ noted some antispasmodic actions of the chamomille on rats.

The possible antibacterial activity of the chamomille oil was investigated by Abbag, Yorself and Planti (1972).⁽⁴⁾ The oil is introduced in plates containing cultures of Gram positive bacteria and Gram negative bacteria. Gram positive bacteria appeared to be more sensitive. These continued to study the antibacterial action of the chamomille oil against staphylococcus aureus. A reduction of growth is observed and the concentration of the oil appeared to be inhibitory to tested staphylococcus aureus. The authors suggest the incorporation of volatile oil in the topical application of staphylococcus infections.

Benner, Marshall and Howard (1973)⁽⁵⁾ described an anaphylactic reaction to chamomille tea.

Gould, Laurence and Ramana (1973)⁽⁶⁾ noted that when patients were given for several days chamomille tea twice a day, they experienced a slight increase in the medn. brachial artery pressure. No other haemodynamic changes were observed. These authors observed that ten out of twelve patients experienced drowsiness after drinking the beverage.

Studies on the antimicrobial action of the chamomille tea by Zeits and Arkedera (1975)⁽⁷⁾ again showed that the oil is more effective in in-

*Matricaria chamomille.*

hibiting the growth of gram positive bacteria. *B. subtilis* was observed to be the most susceptible.

The main pharmacological actions of chamomille can be summarized as:

- (i) slight antihistaminic action
- (ii) slight antispasmodic action
- (iii) granulating and epithelizing action
- (iv) antimicrobial action
- (v) sedative effect.

The dose of chamomille oil is 0.03 - 0.2 ml and of the dry plants 8g - 16g. The lethal dose as described by Horakara⁽⁸⁾ is LD₅₀ in mouse 11.350 mg/kg by oral route, LD₅₀ in rats 14.850 mg/kg by oral route.

Local Use of Chamomille

In Malta the *Matricaria chamomille* is still widely used. The recorded therapeutic uses of the chamomille are:

- a. for the treatment of symptoms associated with the upper digestive tract, such as to relieve the experience of fullness after a heavy meal.
- b. in the form of a gargle to produce a soothing effect on the inflamed gingival and even in pharyngitis.
- c. in the washing of the skin.
- d. to treat acute and chronic rhinitis.
- e. in shampoo formulations.
- f. to treat cracked nipple and nipple rash.
- g. as an aromatic bitter to stimulate appetite.
- h. as a flavouring agent.
- i. in large doses as an emetic.
- j. applied to the skin to treat minor inflammatory conditions.

References

1. Janku, C. Zita, *Cs Pharmacie* 3, 93, (1954).
2. M. Holub, V. Herout, *Cs Pharmacie* 4, 129, (1957).
3. O. Isaak, *Preparative Pharmazie* 11, 189, (1969).
4. Abbag, Yorself, Planti, *Med* 22 (2) 140 - 144 (1972).
5. Benner, Marshall and Howard, *Journal of Clinical Immunology* 52 (5), 307 - 308 (1973).
6. Gould, Laurence, Ramana, *Journal of Clinical Pharmacology* 13 (11/12), 475 - 479 (1973).
7. Zeits, Arkedera, *Farmatsiyn (Moscow)* 24 (6) 41 - 43 (1975).
8. Horakara, *Czechoslovakian fisiolog.* 48 (1952).