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HEALING PROPERTIES OF CAMOMILE AND ITS USE IN VARIOUS DISEASES

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Annotation. Camomile was described in ancient medical writings and was an important medicinal herb in ancient China, Egypt, Greece, and Rome. Today, camomile is promoted for the common cold, indigestion, anxiety, insomnia, excessive crying in infants (colic), respiratory disorders such as cough and bronchitis, and many other conditions. It is also used topically for some skin conditions and as a mouthwash. Some preliminary studies suggest that a chamomile dietary supplement might be helpful for generalized anxiety disorder and associated depression.

Keywords: matricaria camomilla, inflammation, bisoprolol, matricin, chamazulene, skin disease, ulceric colit, diabet.

Matricaria camomilla is one of several different species in the daisy family (Asteraceae) that have the common name chamomile. Also known as German camomile or wild camomile, it is one of two species commonly used for making the tisane (herbal infusion) called chamomile tea. M. camomilla (syn. Matricaria recutita and Camomilla recutita) is an annual native to southern and eastern Europe and western Asia that has been widely introduced in temperate areas elsewhere where it thrives in disturbed areas, meadows and fields. It is closely related to pineapple weed, M. discoidea (sometimes also called wild camomile), a common weed of roadsides and gardens with edible flowers that exudes a pineapple aroma when crushed. It is easy to distinguish from M. chamomilla when in flower because the inflorescences lack ray flowers (the daisy "petals"). There are two types of camomile: German camomile and Roman camomile.

The plants begin blooming in early to midsummer, producing a prolific number of solitary terminal flowers until the seeds begin to ripen in late summer or until frost if deadheaded. As with other plants in the daisy family, the inflorescences of this plant are paniculate flower heads (capitula), each composed of a domed central cone of bright golden yellow tubular florets surrounded by 10-25 white ray flowers. The flowers have a strong, aromatic apple-like fragrance and are attractive to bees and butterflies. After the flowers are spent they are followed by yellowish brown seeds (achenes). Plants readily self-seed (unless all flower heads are removed).

The principle component that is extracted from the flowers of camomile is terpenoids. Camomile is used as a herbal treatment for various skin conditions. It is used as antiallergic, antioxidant, and analgesic. Active component of chamomile contains terpenoids (bisoprolol, matricin, and chamazulene), flavonoids (luteolin, rutin, and apigenin), hydroxycoumarins, and mucilages. It has anti-inflammatory action and also assist in wound healing. This has been widely used in cosmetic products like soothing moisturizers, cleansers, and color-enhancing hair products. This has been used as a popular ingredient in various aroma therapies and hair care. This is known to have a soothing and softening effect on the skin. German camomile flower is approved by the German Commission E for use as an inhalant in skin and mucous membrane

inflammations, bacterial skin diseases, including those of the oral cavity and gums, and respiratory tract inflammations and irritations. The flower has been approved for use in baths, as irrigation for anogenital inflammation, and for use internally to treat GI spasms and inflammatory diseases.

Analgesic

As a follow up to significant beneficial results observed with topical application of chamomile oil in patients with severe carpal tunnel syndrome, investigators conducted a double-blind, randomized, placebo-controlled trial (n=86) in patients with mild and moderate carpal tunnel syndrome to determine the effects of chamomile oil on symptoms and functional status. After 4 weeks topical application of 1% chamomile oil (standardized to 0.227 mg/g apigenin) to the palmar area of the wrist, significant improvements were observed in symptom severity (P=0.017), functionality (P=0.0001), dynamometry (P=0.04), and compound latency (P=0.035) with chamomile compared to placebo.

Anti-inflammatory

Camomile has purported anti-inflammatory effects, but there are no published clinical trials supporting the findings of animal experiments. Chemical constituents of camomile, such as bisabolol, chamazulene, and the flavonoids apigenin and luteolin, possess anti-inflammatory properties.

Antimicrobial

Because of the association of Helicobacter pylori with gastritis, peptic ulcer, and gastric cancer, in vitro experimentation was conducted in H. pylori-infected gastric epithelial cells with 24 medicinal plants indigenous to Pakistan to evaluate their effect on secretion of interleukin (IL)-8 and generation of reactive oxygen species (ROS) in order to assess anti-inflammatory and cytoprotective effects. Although no significant direct cytotoxic effects on the gastric cells or bactericidal effects on H. pylori were found, camomile flower extract was observed to have mild inhibitory activity on IL-8 at 50 and 100 mcg/mL and significant suppression on ROS generation in H. pylori-infected gastric cells.

Antispasmodic

Camomile infusions have been used traditionally as GI antispasmodics despite the lack of rigorous trials to support this use. A small trial of a tea containing camomile and other herbs was effective in treating infantile colic, but the volume of tea required for effect limited its usefulness. Chemical components in chamomile (bisabolol and flavonoids) have demonstrated antispasmodic effects in animal experiments. The use of a chamomile preparation in children with acute, noncomplicated diarrhea reduced the duration of the diarrheal episode compared with placebo and reduced stool frequency. Chamomile has also been used in traditional Asian medicine as a treatment for enuresis; spasmolytic activity on the detrusor muscle may attenuate overactivity. To evaluate use of camomile for enuresis, children with daytime or nocturnal enuresis were enrolled in a double-blind, placebo-controlled randomized trial in Iran (n=80). According to traditional use, chamomile oil was applied topically to the perineal and suprapubic area nightly for a total of 6 weeks. Compared to baseline and placebo, topical camomile application significantly improved mean frequency of enuresis at 2 and 6 weeks ($P<0.001$ each). No significant correlation was found between gender and outcome, and no adverse effects were observed.

Autism

Data from a small, prospective, open-label trial (n = 40; 87.5% boys) in children with autism spectrum disorder showed significant improvement in adaptive functioning and overall behavior after 26-week administration of a supplement containing luteolin from chamomile (100 mg), quercetin (70 mg) and the quercetin glycoside rutin (30 mg); 1 capsule per 10 kg of weight was given daily with food. Changes in raw and age-equivalent scores were significant for all domains except communication raw scores. No major adverse effects were documented; however, 6 children from the original 50 enrolled withdrew due to increased irritability caused by the formulation.

Diabetes

Effectiveness of camomile tea on glycemic and lipid parameters in patients with type 2 diabetes was

evaluated in a single-blind, randomized, placebo-controlled trial (n = 64) conducted in Iran. Camomile tea 3 g per 150 mL prepared as a 10-minute infusion without sugar or milk was given 3 times daily immediately after meals for 8 weeks. Statistically significant improvements were observed at 8 weeks with camomile tea compared to controls, respectively, for the mean difference in serum insulin (−5.27 vs 0.34 microunits/dL; P < 0.001), HbA1c (−0.43 vs 0.01%; P = 0.03), insulin resistance measurements (−2.81 vs 0.31, P < 0.001), total cholesterol (−17.25 vs 4.06 mg/dL; P = 0.001), LDL (−8.9 vs 2.9 mg/dL; P = 0.05), and triglycerides (−38.62 vs 7.12 mg/dL; P < 0.001). Compared to baseline, all of these parameters also improved significantly in the chamomile tea group in addition to the mean difference in serum glucose (−20.4 mg/dL; P = 0.004); whereas in the control group, serum insulin levels worsened significantly (0.34 microunits/dL; P < 0.001). No adverse events were reported.

Eczema

Commercial preparations of camomile-containing creams are widely available despite the lack of trials to support their use. In a study designed to evaluate the effect of massage with chamomile essential oil versus massage only, no difference was found for the 2 study arms. Additionally, further use of the essential oil after the study period showed a decline in eczema severity, suggesting possible sensitization to the oils over time. In another trial, camomile cream was as effective as hydrocortisone 0.25% cream in the treatment of atopic eczema. A more recent trial using a nonallergenic camomile extract showed that chamomile extract was slightly superior to hydrocortisone 0.5%, but only marginally better than placebo.

Radiation dermatitis

In a study designed to investigate the efficacy of chamomile cream in acute radiation dermatitis, no difference was found between camomile and almond creams. Furthermore, review of the data did not reveal any additional trials; therefore, the use of chamomile cream for this condition is discouraged.

Ulcerative colitis

A 12-month randomized, double-blind, active-controlled trial (n = 96) found no significant difference in relapse-free time, endoscopy, or fecal biomarkers in ulcerative colitis (UC) patients in remission treated with the gold standard, mesalazine, or a combination of dry extract of camomile flowers (70 mg) and coffee charcoal (50 mg). Overall relapse rates were 53% and 45% in the herbal group versus the mesalazine group, respectively, and no significant differences were found between the 2 groups in Colitis Activity Index scores. This study describes first evidence of a potential non-inferior treatment to the gold standard treatment for UC.

Conclusion, this information relates to an herbal, vitamin, mineral or other dietary supplement. Information was provided about a number of beneficial properties of chamomile. In addition, chamomile can also be used for other diseases. It should not be forgotten that, as with any medicine, it is advisable to use it taking into account its interaction with other drugs and the body.

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