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**File: ■ Chamomile (*Matricaria recutita* syn. *M. chamomilla*, Asteraceae)  
■ Skin Damage**

**HC 081712-587**

**Date: February 28, 2018**

**RE: A Review of Chamomile Preparations Used for Treating Skin Damage**

Ferreira EB, Vasques CI, Jesus CAC, Reis PED. Topical effects of *Chamomilla recutita* in skin damage: a literature review. *Pharmacologyonline*. 2015;3:123-130.

Chamomile (*Matricaria recutita* syn. *M. chamomilla*, Asteraceae) flowers are a well-known medicinal herb that have been used to treat various skin conditions. Numerous studies have provided evidence that chamomile may be effective at treating different types of skin disorders due to its antioxidant, anti-inflammatory, and anti-allergic properties. The aim of this review was to assess the literature and evaluate the use of chamomile for preventing and/or treating skin damage.

A literature search was conducted using Cochrane Library, PubMed, Latin American and Caribbean Health Sciences Literature (LILACS), Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Web of Science databases. Publications in Portuguese, English, Spanish, and German languages were included. There were no limitations on publication dates, but case studies, preclinical studies, reviews, and letters to the editor were excluded from the study. Search words and terms included *Matricaria*, chamomile, *Chamomilla recutita*, and variations of these names, and skin care or skin disease, among others. There were two reviewers that selected the articles independently, and a third reviewer intervened if there were any disagreements.

Out of the 392 publications that were eligible for the review, 17 studies were selected, and 11 were used for qualitative synthesis for this review. The included studies assessed the topical effects of chamomile for different skin conditions, including the following: ultraviolet (UV)-induced erythema, pityriasis alba, lesions similar to eczema, peristomal lesions, contact dermatitis, phlebitis, atopic eczema, erythema induced by removal of adhesive tape, radiodermatitis, induced contact dermatitis, wound, and eczema. There were six studies in English, four in German, and one in Portuguese.

The chamomile formulations used included aqueous and alcohol extracts, infusions, creams, and an ointment (2% chamomile extract with the terpene compounds  $\alpha$ -bisabolol and chamazulene; Kamillosoan®; Menarini; Florence, Italy). In six of the studies, chamomile treatments showed superior therapeutic effects compared to corticosteroids. Studies with Kamillosoan, consisting of 2% chamomile flower extract, delayed the onset

of erythema and moist desquamation resulting from radiotherapy, compared to another reference ointment. Kamillosan cream also was found to be more effective than corticosteroids, but similar to the placebo for the treatment of eczema. In another study, Kamillosan cream was found to be as effective for eczema treatment as the corticosteroid hydrocortisone (0.25%), but more effective than the corticosteroids fluocortin (0.75%) and bufexamac. Finally, Kamillosan ointment was shown to be superior to a reference product for its soothing effects on the skin of patients with contact dermatitis.

Peristomal lesions also healed faster in the group using an aqueous chamomile extract compared to those using hydrocortisone treatment. A compress infused with 2.5% chamomile flower extract was found to be the most effective in a dose-response study that evaluated regression of vein inflammation. A chamomile extract was also found to reduce wound area more effectively than a placebo treatment. When evaluating different formulations, it was found that a chamomile extract was more effective in a liposomal cream preparation than a non-liposomal cream preparation.

On the other hand, a cream-based treatment with chamomile alcohol extracts was found to be no different than the placebo treatments for pityriasis alba and other eczema-like conditions. A study found that a (20 mg/g) chamomile-based cream had less anti-inflammatory activity in patients with UV-induced erythema compared with a 1% hydrocortisone cream. A study comparing six different plant extracts also found that corticosteroids were more effective than a 1% chamomile extract.

This review demonstrated the support from several studies that chamomile preparations can be more effective than corticosteroids for treating skin damage. In particular, it appears concentrations around 2-2.5% were the most effective. Although these results are promising, the authors did not clarify whether or not different chamomile species were included in the studies. Other species, such as *Chamaemelum* spp., have an increased risk of adverse reactions when used topically. There also is an increased risk of allergic cross-reactions in individuals with a preexisting sensitization to sesquiterpene lactones of the Asteraceae family. Future trials should assess different doses of chamomile extracts, confirm the plant species, assess bioactive compound concentrations/profiles/mechanisms of action, and evaluate the effects the chamomile preparations have on different skin conditions.

—*Laura M. Bystrom, PhD*

The American Botanical Council has chosen not to reprint the original article.

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