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COMPOSITION, PROPERTIES AND APPLICATION OF CALENDULAS IN MEDICINE

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Calendula is an annual herbaceous plant from the Asteraceae family with small yellow or orange flowers and crescent-shaped or hook-shaped seed fruits (for this form, reminiscent of bird claws, the calendula was called marigold) [1].

The pharmacological activity of calendula preparations is due to the presence in the raw material of a complex of biologically active substances (BAS), namely: carotenoids, flavonoids, triterpene saponins and a number of related substances. In different parts of the plant, chemical composition is different. The largest number of biologically active substances is found in calendula flowers. They contain up to 3% carotenoids and up to 0.8% flavonoids. Monoterpene lactone - loliolid with antitumor activity was isolated from the flowers of calendula officinalis. The tart aroma of the plant is due to the presence of essential

oil. The seeds contain fatty oils and alkaloids. Carotene (provitamin A), which is found in marigolds, affects the color of the plant: in orange flowers it is twice as much as in white. Due to all these substances, calendula preparations have high pharmacological activity [2].

Calendula flowers are used to create various medicines. Everyone knows tincture of calendula for gargling, treating wounds and bruises, diseases of internal organs. These medicinal and beneficial properties of plants provide the chemical composition of the flowers.

The study of the chemical composition led to the creation of not only tinctures of calendula, but also other drugs from it, for example, carotenoids formed the basis of carophilene ointment, which successfully heals inflammatory processes. Also there is a drug released for the treatment of gastritis and gastric ulcer that is called "Kaleflon". This drug not only destroys bacteria that cause ulcerative lesions of the tissues of the stomach, but also accelerates the recovery of mucous membranes.

Clinical observations showed that abundant irrigation of the oral cavity with an aqueous solution of tincture of marigolds before and after the removal of tartar, insertion of turundum, abundantly moistened with undiluted tincture of the plant into the pathological gum pockets, relieved inflammation, reduced or stopped discharging from the gum pockets, bleeding of the gums, and contributed to compaction gum tissue. Shredded fresh leaves are applied to wounds, abscesses, boils [3]. In animals, when administered intravenously, blood pressure decreases, the amplitude of heart contractions increases and its rhythm slows down, calendula preparations have a calming effect on the nervous system. Calendula reduces dyspeptic symptoms and intoxication.

The ointment is prepared by mixing fresh juice of marigolds and lanolin (petroleum jelly, lard) in a ratio of 1:10. You can prepare it from the smallest powder of reed flowers on lanolin (1:10). Calendula tincture (Tinctura Calendulae) is prepared from regional flowers or from flower baskets with 70% alcohol (1:10). In summer, for tinctures for alcohol, you need to take fresh, just picked flowers, fill them with a 0.5 liter jar and pour vodka to the top. After seven days of insisting in a dark place, strain and apply as directed.

Water infusion of calendula (sometimes called tea) is prepared from dry flower calendula baskets (1:10).

NK tablets (marigold with nicotinic acid) contain 0.25 g of calendula flower basket powder and 0.1 g of nicotinic acid. "Rotokan" is a combined preparation, which includes calendula. It is prescribed for heart disease, hypertension, neurosis. Calendula ointment is made from 20 g of calendula tincture and 90 g of an emulsion, which is a petroleum jelly diluted in water. The ointment is available in glass jars of 40 g and has a yellowish color. It is recommended for burns, cuts, cracking lips, nipples, bruises, eczema. The drug "Kaleflon", based on calendula flowers, is prescribed for ulcers and chronic gastritis of the stomach and duodenum, as a choleric agent for diseases of the liver and bile ducts, as a symptomatic agent for malignant diseases of various localization [4].

Thus, the pharmacological effect of calendula is due to the presence in its flowers of a rich spectrum of biologically active substances, and the availability of raw materials allows this medicinal plant to be widely used to treat various diseases, both in humans and animals.

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