

EXPERIMENTAL EVALUATION OF THE LACTOGENIC EFFECT OF DILL SEEDS (*Anethum graveolens* L.) UNDER HYPOLACTATION CONDITIONS

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Hypolactation is characterized by insufficient breast milk production and may negatively affect adequate nutrition and growth of newborns. The search for natural plant materials with potential lactogenic activity is therefore of scientific and practical interest. Dill (*Anethum graveolens* L.) seeds have long been used in traditional medicine, but their lactogenic activity under experimentally induced hypolactation requires further investigation.

The aim of this study was to experimentally evaluate the effect of dill seeds on lactational activity under conditions of experimentally induced hypolactation. The study was performed using reproductive female laboratory mice and their newborn offspring. The animals were divided into three groups: control, hypolactation, and experimental. Hypolactation was induced pharmacologically using bromocriptine. The experimental group received dill seeds at a dose of 500 mg/kg body weight per day. The lactation process was assessed by monitoring the body-weight dynamics of newborn pups, the general physiological condition of maternal animals, suckling activity, mammary gland functional changes, and serum prolactin concentration. Serum prolactin was determined by the enzyme-linked immunosorbent assay (ELISA).

The experimental observations demonstrated a more pronounced increase in body weight of newborn pups in the group receiving dill seeds compared with the hypolactation group. During the first 3 days, the average daily body-weight gain of pups in the experimental group was approximately 0.35–0.40 g; during days 4–7, it increased to 0.45–0.60 g, and during days 8–10, to 0.60–0.90 g. By the end of the observation period, the mean body weight of pups in the experimental group reached approximately 6.8–7.2 g. More active suckling and signs of enhanced mammary gland functional activity were also observed in mothers receiving dill seeds. Serum prolactin concentration was higher in the experimental group than in the hypolactation group.

Thus, the obtained findings indicate that dill seeds (*Anethum graveolens* L.) possess promising lactogenic potential in experimental hypolactation. The observed improvement in pup growth and lactational activity, together with increased serum prolactin concentration, supports the need for further pharmacological, phytochemical, histological, and statistical studies to clarify the active constituents and mechanisms of action of dill seeds.