

EVALUATION OF LAXATIVE ACTIVITY OF KABZ-GUL (AN HERBAL CHURNA) IN RATS

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Summary

Kabz-Gul is an herbal churna it widely used in traditional medicine for the treatment of chronic constipation. Kabz-Gul contains Saunf, Senna, Harad, Gulab phool, Pippali, Ajowan, Nishod, Coriander, Saindh salt, Black salt, Beeja poorra and Ginger. The aqueous extract of Kabz-Gul was evaluated for laxative activity in Wister rats. Laxative activity was assessed by increase in weight of faecal out put at 8th and 16th hour. *Senna* was used as reference standard. The results of the study revealed that, the Kabz-Gul exhibited significant ($p < 0.05$) laxative activity. This study thus justifies the traditional use of the Kabz-Gul.

Key words: Kabz-gul, Laxative activity, Senna, Harad, Gulab phool.

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Introduction

Constipation is defined as a condition of the bowel in which the feces are dry and hard, making evacuation difficult and infrequent (1). Constipation is a common symptom, and as many as one in eight people take laxatives at least once each month (2,3). Constipation may be idiopathic or may be caused by various identifiable disease processes (4).

Laxatives are agents that add bulk to intestinal contents, which retain water within the bowel lumen by virtue of their osmotic effect, or that stimulate intestinal secretion or motility, thereby, increasing the frequency and ease of defecation (4). Many types of laxatives have been developed, including bulking agents such psyllium and dietary fiber; osmotic agents such as magnesium sulfate and sorbitol; stimulants such as decussates, bisacodyl and anthraquinone; lubricating agents such as mineral oil. Extracts from the roots, bark and dried leaves of buckthorn, Senna, cascara, aloe, frangula and rhubarb contain anthraquinone derivatives, and are used as herbal laxative preparations (5).

Kabz-Gul is an herbal churna it widely used in Traditional medicine for the treatment of chronic constipation (6). It consists of Saunf (*Foeniculum vulgare*), Senna (*Cassias lalceolata*), Harad (*Terminalia chebula*), Gulab phool (*Rosa contifolia*), Pippali mula (*Piper longum*), Ajowan (*Trachspermum ammi*), Nishod (*Ipomea turpethum*), Coriander (*Coriandrum sativam*), Saindh salt, Black salt, Beeja poora (*Citrus medica*), and Ginger (*Zingiber officinale*). The main aim of the study is to find the laxative activity of herbal churna.

Materials and Methods

Preparation of Kabz-Gul

Saunf, Senna, Harad, Gulab phool, Pippali, Ajowan, Nishod, Coriander, Saindh salt, Black salt, Beeja poora, Ginger are purchased from Yucca Enterprises, Mumbai

(India). All the ingredients were powdered and passed through the 100 No. Sieve and mixed geometrically.

Animals

Wister rats weighing about 150-200 g of either sex were acclimatized to the experimental room temperature 23 ± 2 °C, controlled humidity conditions (50-55%) and 12 h light and 12 h dark cycle. They were caged with a maximum of two animals in each polypropylene cage and were fed with standard food pellets (Kamadenu Enterprises, Bangalore) and water *ad libitum*.

Laxative activity

The laxative activity was performed according to Capasso et al (6, 7). on rats of either sex, fasted for 12 h before the experiment, but with water provided *ad libitum*. The animals were divided into 4 groups of six animals each. The first group of animals, serving as control, received normal saline (25 ml/kg); the second group serving as reference, received aqueous extract of *Senna* (30 mg/kg) while third, fourth and fifth groups received aqueous extract of Kabz-gul at doses of 50 and 100 mg/kg respectively. Immediately after administration of dose, the animals were isolated and housed separately in polypropylene cages suitable for collection of feces. After 8 h of drug administration the feces were collected and weighed. Thereafter, food and water were given to all animals and faecal outputs were again weighed after a period of 16h.

Statistical analysis

The Data were expressed as mean \pm SEM. The differences were compared using one-way ANOVA followed by Dunnett's test using PRISM software (version 4). The results were considered significant when $p < 0.05$.

Results and Discussion

The aqueous extract of Kabz-gul showed significant ($P < 0.01$) laxative activity when compared with standard *Senna* (Table1). The dose dependent response was observed at 50 and 100 mg/kg. The faecal out put weight was increased as the dose increases at 8th hour. At 100 mg/kg of Kabz-gul excretes mucous faecal matter. *Senna* known as laxative, contain anthraquinone glycosides sennoside (A, B, C and D), which are gastric irritants (8).

Table 1: Laxative activity of aqueous extract of Kabz-Gul in rats

Treatment	Dose (mg/kg, p.o)	Faecal out put (g)	
		8h	8-16 h
Control	-	0.0866± 0.054	1.168± 0.019
Senna	30	1.934 ± 0.10**	2.3 ± 0.060**
Kabz-Gul	50	0.562 ± 0.27	1.4± 0.01
	100	1.41 ± 0.04**	2.1± 0.23**

Mean±. S.E.M. (n=6), ** $P < 0.01$ Vs control (Normal saline) by Dunnett's test

Foeniculum vulgare, *Terminalia chebula*, *Rosa contifolia*, *Ipomea turpethum*, and *Piper longum* used for the treatment of constipation (9,10). The study thus justifies the traditional claim of Kabz-Gul in treatment of chronic constipation.

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