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**Laxative activity of Siddha formulation Pirandai vadagam
in experimental animals**

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Abstract

Siddha is the oldest yet, most relevant medical system available to mankind. For the healthy life, Siddhars have mentioned daily and seasonal regimen including dietary habits and also insisted some code of ethics. Constipation is now major problem in worldwide. It is the most common gastrointestinal disorder and occurs in 2% to 20% of the population. In this study, the Siddha formulation Pirandai vadagam showed better laxative activity in experimental animals.

Keywords: laxative, constipation, Pirandai, Siddha

Introduction

Plant and products are being used as a source of medicine since long. According to the World Health Organization, more than 80% of the World's population, mostly in poor and less developed countries depends on traditional plant-based medicines for their primary health care needs [1]. The present study was intended to evaluate the laxative activity of the siddha formulation pirandai vadagam.

Materials and Methods

Ingredients

Cissus quadrangularis (Pirandai), *Zingiber officinale* (Inji), *Cuminum cyminum* (Seeragam), *Terminalia chebula* (Kadukkai), *Carum copticum* (Omam) and Sodium chloride (Uppu). The preparation was made as per text.

Animals

Male Wistar Albino rats weighing between 180-220 g were used for the study. The animals were obtained from animal house of K.M College of Pharmacy, Madurai, Tamil nadu. On arrival the animals were placed at random and allocated to treatment groups in polypropylene cages with paddy husk as bedding. Animals were housed at a temperature of 24±2 C and relative humidity of 30-70%. A 12:12 light: dark cycle was followed. All animals were allowed free access to water and fed with standard commercial pelleted rat chaw (Hindustan Lever Ltd, Bangalore). All the experimental procedures and protocols used in this study were reviewed by the Institutional Animal Ethics Committee (661/c/CPCSEA) and were in accordance with the guidelines of the CPCSEA.

Laxative Activity [2]

Rats fasted for 12 h before the experiment, were placed individually in cages lined with clean filter paper. The animals were divided into 4 groups of 6 rats in each group. Group I, served as control received saline (10ml/kg,p.o.), Group II served as reference control received sodium picosulfate (5mg/kg,p.o) and group III and IV received 50 and 100 mg/kg of siddha formulation Pirandai Vadagam respectively through oral administration. The total weight of normal as well as wet faeces production in all 4 groups was monitored for 16 h.

Statistical Analysis

Result were expressed as mean \pm SEM. The data were analyzed by using one way analysis of variance (ANOVA) followed by Newmann Keul's multiple range tests. P values <0.05 were considered as significant.

Results

The siddha formulation pirandai vadagam was studied for its laxative activity in Wistar Albino rats. The

laxative activity was assessed by measuring the wet faeces in all test drugs administered groups. The siddha formulation pirandai vadagam showed significant ($P<0.01$) dose dependent laxative activity as compare to normal control animals. The laxative activity produced by the siddha formulation Pirandai vadagam was similar to that of the reference control sodium picosulfate. The laxative activity of siddha formulation Pirandai vadagam was studied in rats. The results showed that an oral administration of the siddha formulation Pirandai vadagam produced significant and dose dependant increase in faeces output of rats. Sodium picosulfate is a member of the polyphenolic group of stimulant laxatives. Following oral administration, it is converted in the colon to an active form through the action of bacterial enzymes [3]. As a result, its effect are directed the colon, where it stimulates peristalsis and, in common with other laxatives, reduces water reabsorption leading to the softening of stools. The result suggest that the siddha formulation Pirandai vadagam might also be produced its laxative activity by reducing the water reabsorption in the colon which might soften the stool.

Table I: Laxative activity of siddha formulation Pirandai vadagam in rats.

Groups	Drug Treatment	Faeces Output (Gms)
I	Control saline(10ml/kg)	3.65 \pm 0.36
II	Sodium picosulfate (5mg/kg)	12.18 \pm 1.20***
III	Pirandaivadagam200mg/kg	10.40 \pm 0.92***
IV	Pirandaivadagam400mg/kg	11.50 \pm 0.98***

Values are in Mean \pm SEM;(n=6); *P<0.05, **P<0.001 Vs Control

Discussion

The laxative activity of siddha formulation pirandai vadagam was studied in rats. The results showed that an oral administration of the siddha formulation pirandai vadagam produced significant and dose dependant increase in faeces output of rats. Sodium picosulfate is a member of the poly phenolic group of stimulant laxatives. Following oral administration, it is converted in the colon to an active form through the action of bacterial enzymes [3]. As a result, its effects are directed the colon, where it stimulates peristalsis and, in common with other laxatives, reduces water reabsorption leading to the softening of stools. The

results suggest that the siddha formulation pirandai vadagam might also be product its laxative activity by reducing the water reabsorption in the colon which might soften the stool.

Conclusion


From the result it could be concluded that oral administration of siddha formulation pirandai vadagam shows significant laxative activity in rats. Further phyto-chemical studies are required to isolate the active compounds responsible for laxative activity which could be a major contribution to prove the claims in Indian system of medicine.

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References

1. Dr. K. Radhakrishnan L.I.M., editor. Anubhava Vaithiya Dheva Rahasiyam (4th part, Pg 555). Edition 1926, Chennai: B.Rathina Nayakar and sons.
2. WHO. IUCN and WWF: guidelines on the conservation of medicinal plants, IUCN gland, Switzerland. 1993; 1:4-6.
3. Capasso F, Mascolo N, Autore G and Romano V. Laxatives and the production of autacoids by rat colon. Journal of pharmacy and pharmacology.1986; 38:627-629.
4. Kim DH, Hyun SH, Shim SB and Kobashi K: the role of intestinal bacteria in the transformation of sodium picosulphate. Japanese journal of pharmacology 1992; 59:1-5.
5. Pharmacological and therapeutic activities of *Cissus quadrangularis*: An overview.
6. Tanmoy Mukherjee, Nabarun Saha, Satadru Palbag. Ethnopharmacology, phytochemistry and Pharmacology of Ayurvedi plant Hadjod – *Cissus quadrangularis* (L). Int. J. Res. Ayurveda Pharm. Jul – Aug 2016;7(4):78-83
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