



A Comparative Study between Cyproheptadine and *Carum Carvi* as Appetite Stimulant in Case of Weight Gain

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ABSTRACT: Appetite stimulators are the therapeutic compounds that increases appetite and help in weight gain. The commonly used synthetic appetite stimulators may be in the form of a synthetic drug (Cyproheptadine) or a hormone (Ghrelin) which increases hunger and therefore enhances food consumption leading to weight gain. Weight gainers are advised in case of children that show poor eating habits to enhance their appetite. The use of synthetic or chemical source is often accompanied with side effects such as abnormal weight gain, confusion, ataxia, drowsiness, dry mouth leading to a slower metabolism. This comparative study, gives an overview on the potential capacity of *Carum carvi*, a carminative, obtained from natural source having lesser side effects and a significant potential to increase the peristaltic movement thus leading to increased gastric motility. The 5-HT antagonist, cyproheptadine increases appetite by blocking the action of 5-HT_{2A} and shows additional anti-histaminic action. Therefore, it increases the GIT motility. But it is accompanied with many side effects such as drowsiness, ataxia, dry mouth and confusion. Whereas, *Carum carvi*, a natural GIT motility enhancer increasing the peristaltic movement by blocking the action of acetylcholine. Therefore may act as anti-cholinergic agent that enhances the GIT motility that enhances appetite with minimal side effects.

KEYWORDS: Appetite stimulants, anti-cholinergic, GIT motility, weight gain, 5-HT receptors.

INTRODUCTION

Pediatric anorexia is an eating disorder of childhood, characterized by long-term decrease or disappearance of appetite, reduction or even refusal to eat.[1] Children of all ages may suffer from this disease, especially children aged 1-6, and can affect up to 45 % of children.[2,3] Anorexia in children may lead to malnutrition, conditions such as rickets and scurvy, and may delay growth, effect cognitive ability and immunity, if it cannot be resolved it can last for a long time.[4,5]

Anorexia nervosa received its present name only in the late 19th century [6]. In the 20th century, critical analyses of epidemiological data showed that a true increase in the incidence and prevalence rates of anorexia nervosa over time was questionable. [7, 8]

The aim of this study was to compare the efficacy of cyproheptadine and *Carum carvi* in stimulating appetite and increasing body weight, energy intake, and general well-being in a group of patients with dyspeptic symptoms.

MECHANISM OF ACTION

Cyproheptadine:

Some medicines such as histamine receptor (H1) blockers can affect weight regulation mechanisms and cause weight changes. Cyproheptadine is one of the most administered drugs for appetite increase and weight gain in people who suffer from strong weight loss [9]. Recently, cyproheptadine has been accepted as an appetite stimulator in catexia [10, 11]. Cyproheptadine is an antihistamine with strong anticholinergic and antiserotonergic effects. [12, 13]

The possible reasons for appetite stimulation and weight gain by cyproheptadin are:

- 1) inhibition of 5-HT_{2A} receptors,
- 2) reduction in gastrointestinal tract motility and subsequently increasing transit time of food, due to anticholinergic effects of the drug, and
- 3) drowsiness and hypoactivity and storage of excess calories. [14]



Precaution and adverse reactions:

Cyproheptadine has been reported to cause fulminant liver failure in individual cases, and is not recommended for use in the presence of hepatic lipidosis. [15]

Carum carvi:

In human trial studies, some herbal preparations consisting predominantly caraway have shown efficacy in relieving dyspeptic symptoms. The antispasmodic effect of an alcoholic extract of caraway has shown inhibitory effects on smooth muscle contractions induced by the spasmogens, acetylcholine and histamine. This response has been evaluated to explain the beneficial effect of caraway in relieving gastrointestinal symptoms associated with dyspepsia. In a study done on 12 intestinal bacteria, caraway oil displayed high degree of selectivity, inhibiting the growth of potential pathogens at concentrations that had no effect on the beneficial bacteria examined. This effect was related to the efficacy and usefulness of caraway oil in traditional medicine for treating symbiosis which is associated with a number of gastrointestinal and systemic disorders. [16]

Precaution and adverse reactions:

No health hazards or side effects are known in conjunction with the proper administration. [17]

CONCLUSION

From the above given data, it is clear that there have been significant potentials seen in *Carum carvi* as appetite stimulant. The marketed, cyproheptadine used has many side-effects mainly abnormal weight gain, sedative effect that makes an individual lazy. Therefore to prevent such side effects in case of children, a natural substitute may be used such as *Carum carvi* which is commonly used in Indian cuisines.

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