



EFFECT OF SIMETHICONE DROP IN FLATULENCE



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Abstract. The most common problems encountered by human beings are bloating and discomfort due to accumulation of gas in the stomach. The study aimed to evaluate and compare the effect of simethicone sublingual drug on salivary amylase and flow rate before and after ingestion.

Keywords: Sublingual drug Simethicone, barrier for protection, medicated chocolate, flatulence, Antiflatuence, Ceratonia siliqua

The target of study is to formulate and evaluate a nutritious simethicone chocolate with least number of side-effects and its interactions. Simethicone primarily acts in the stomach and intestine which lessens the surface tension of small number of bubbles resulting in coalescence into larger bubble leading to elimination of gas through flatus and belching. Chocolate/cocoa has been known for its good taste and proposed health effects from centuries. Most of the drugs are bitter or bland due to which oral administration of these drugs leads to patient incompliance especially in children. Cocoa which is the chief ingredient of many chocolate formulations was substituted with carob (*Ceratonia siliqua*) because cocoa containing formulation requires huge amount of sugar content and it contains caffeine causing stimulation of CNS. Although carob contains sweeteners naturally; contains no fat, no caffeine, no oxalates it becomes beneficial tremendously. The medicated chocolate was prepared by incorporating Simethicone into chocolate base which was made from carob powder, cocoa butter, peanut butter and was evaluated for general appearance, moisture content determination, fat bloom test, hardness test, its dimension, and stability in packaging material. Disintegration test was performed by using artificial saliva as its medium in order to note the time required to disintegrate the base and report the time at which the drug is released.

Simethicone, a silicon-based organic polymer, is widely used to treat the conditions of excessive gas due to its anti-foaming properties. Also, it is used to treat diseases like heartburn, gastric ulcer, colic, sensitive bowel syndrome. It is available in various forms like capsule, drop, suspension, chewable tablet.[10111213] More than 50% of the drug delivery systems available in the market are oral route because



of low cost and ease of ingestion which lead to high levels of comfort to the patient.[14]

Simethicone is used as a topical barrier for protection, is used for protection of the mucosa against irritants such as gastric HCl, acetylsalicylic acid, or biliary salts.[15] Simethicone likely acts along with the endogenous surface-active substances of the lining of gut mucosa. The effects of simethicone are interlinked with the intraluminal actions of the compound in the gastrointestinal tract, since it is executed and nontoxic.[16] Therefore, the study was concentrated on the activity of amylase in saliva with the aim of developing a simple quantitative measurement technique to monitor human stress in persons with floating disturbances. Hence, the study was done with the objective to evaluate and compare the effect of simethicone oral disintegrating drug on salivary amylase and flow rate before and after 1 and 2 hours of ingestion of simethicone. A hypothesis was formulated that the salivary amylase level will be the same before and after ingestion of simethicone.

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