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A Review on Polyherbal Lozenges for The Management of Sore Throat and Respiratory Disorders

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ABSTRACT: Polyherbal lozenges have emerged as an effective and patient-friendly oral dosage form for the management of sore throat, cough, and minor respiratory infections. Lozenges are designed to dissolve slowly in the oral cavity, providing prolonged local action and improved therapeutic efficacy. The incorporation of multiple medicinal herbs such as ginger, clove, liquorice, tulsi, vasaka, turmeric, mint, and honey enhances antimicrobial, anti-inflammatory, expectorant, and soothing effects. This review highlights the concept of lozenges, their advantages and limitations, classification, methods of preparation, disease relevance, and a comprehensive overview of previously reported research on polyherbal lozenges. Literature evidence supports polyherbal lozenges as a safe, economical, and effective alternative to conventional synthetic formulations, with high patient compliance and minimal side effects.

KEYWORDS: Polyherbal lozenges, sore throat, pharyngitis, herbal drug delivery, oral dosage forms.

I. INTRODUCTION

Lozenges are solid oral dosage forms intended to dissolve slowly in the mouth or throat, releasing medicaments over an extended period. They are commonly prepared using sweetened bases such as sugar, jaggery, or honey, which improve palatability and patient acceptability. Lozenges are particularly beneficial for pediatric and geriatric patients who have difficulty swallowing tablets or capsules.

The prolonged residence time of lozenges in the oral cavity allows localized drug delivery, making them ideal for treating throat infections and oral discomfort. Additionally, lozenges may enhance bioavailability by reducing first-pass metabolism and eliminating the need for water intake. In recent years, increasing interest in herbal and natural medicines has promoted the development of polyherbal lozenges that combine multiple medicinal plants to achieve synergistic therapeutic effects. [1]

II. ADVANTAGES OF POLYHERBAL LOZENGES [2]

- Easy and economical manufacturing process
- Reduced dosing frequency due to sustained drug release
- Suitable for patients with swallowing difficulties
- Improved patient compliance due to pleasant taste
- Prolonged contact with oral mucosa for enhanced local action
- Can be discontinued easily if therapy is not required
- No need for water during administration

III. DISADVANTAGES OF POLYHERBAL LOZENGES [2]

- Partial drug loss due to swallowing with saliva
- Risk of misuse as candy by children
- High temperature required for preparation of hard lozenges
- Suitable only for heat-stable drugs
- Not recommended for children below six years of age
- Unsuitable for drugs with intense bitterness

IV. TYPES AND CLASSIFICATION OF LOZENGE [3]

4.1 Based on Texture and Composition

- Hard lozenges
- Soft lozenges
- Chewable or caramel lozenges
- Compressed tablet lozenges

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4.2 Based on Site of Action

- Local acting lozenges
- Systemic acting lozenges

V. ANATOMICAL RELEVANCE: PHARYNX [4]

The pharynx is a muscular tube extending from the nasal and oral cavities to the esophagus and larynx. It is divided into the nasopharynx, oropharynx, and hypopharynx. These regions contain lymphoid tissues such as tonsils and adenoids, which play a vital role in immune defense. Since lozenges remain in contact with these structures for a prolonged duration, they are highly effective for localized treatment of infections and inflammation of the throat.

VI. METHODS OF PREPARATION OF LOZENGES [5]

6.1 Hand Rolling Method

This method does not require specialized equipment and is suitable for small-scale preparation. Ingredients are mixed uniformly and rolled into lozenge shapes.

6.2 Fusion (Molding) Method

In this method, the base material is heated, mixed with active ingredients, and poured into molds. It is commonly used for preparing hard, soft, gummy, and chewable lozenges and requires precise temperature and weight control.

VII. DISEASE PROFILE: PHARYNGITIS [6]

Pharyngitis, commonly known as sore throat, is characterized by inflammation of the pharyngeal mucosa, leading to pain, irritation, and difficulty in swallowing. It is primarily caused by viral infections such as the common cold and influenza, although bacterial infections may also contribute. Symptoms generally resolve within 3–10 days. Pharyngitis may be classified as acute or chronic based on symptom duration. Contributing factors include infections, allergies, gastroesophageal reflux disease, irritants, mouth breathing, and environmental factors. Polyherbal lozenges help relieve symptoms by soothing inflamed tissues and delivering antimicrobial and anti-inflammatory agents locally.

VIII. REVIEW OF LITERATURE

Several studies have reported the formulation and evaluation of polyherbal lozenges containing medicinal herbs such as ginger, clove, liquorice, tulsi, vasaka, turmeric, mint, pepper, guduchi, ajwain, and honey. These formulations demonstrated antimicrobial, anti-inflammatory, expectorant, and soothing properties.

Evaluation parameters including hardness, friability, weight variation, disintegration time, taste, and stability were found to be within acceptable pharmacopoeial and GMP limits. Analytical techniques such as UV spectrophotometry, HPTLC, and physicochemical analysis confirmed the presence of active phytoconstituents. Volunteer-based studies and stability testing further supported the safety, efficacy, and patient acceptability of polyherbal lozenges.

Overall, the reviewed literature strongly supports polyherbal lozenges as a promising herbal drug delivery system for the management of cough, sore throat, and minor respiratory infections.

IX. CONCLUSION

Polyherbal lozenges offer an effective, safe, and economical approach for the treatment of throat and respiratory disorders. By combining multiple medicinal herbs, these formulations provide synergistic therapeutic benefits along with improved patient compliance. The reviewed studies demonstrate that polyherbal lozenges meet quality standards and possess significant potential as an alternative to conventional synthetic lozenges. Further clinical and analytical investigations may strengthen their role in modern pharmaceutical practice.

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