Sialagogues and Antisialagogues
Review Article

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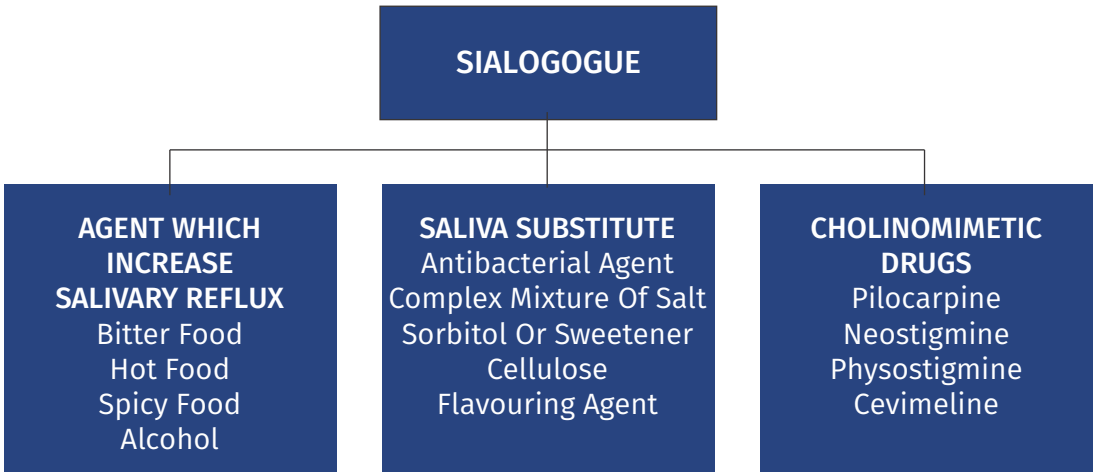
Abstract

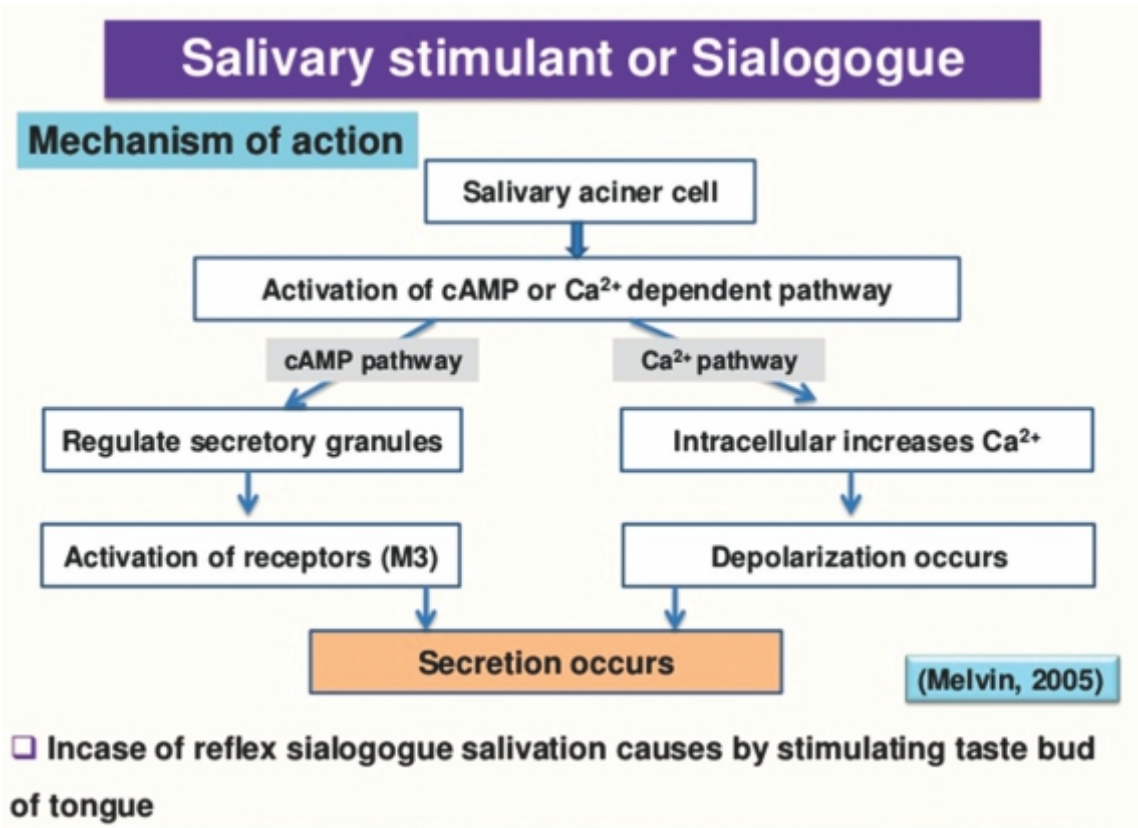
Salivary gland dysfunction is a relatively common problem which results in the symptoms of a dry or drooling mouth , difficulties with speech, problems with eating, mucosal infections, denture intolerance, sialadenitis, increased dental caries and periodontitis. Etiology may be a functional disturbance or morphological disorder.

Sialagogue or ptyalagogue is a drug or substance that increases the flow rate of saliva. Sialagogues can be used in the treatment of xerostomia to stimulate any functioning salivary gland tissue to produce more saliva. The most common sialagogues are parasympathomimetic drugs, chewing gum, malic and ascorbic acid. Antisialagogues are used to reduce the salivary flow. The most common antisialagogues are antimuscarinic and anticholinergic agents. Sialagogues are classified into agents which increase salivary reflux, saliva substitute and cholino-mimetic drugs. Antisialagogues mainly act locally or systemically. Sialagogues and antisialagogues have greater significance in dentistry. Through the article the reader gets acknowledged about the various indications contraindications actions of these drugs.

SIALOGOGUES CLASSIFICATION



MECHANISM OF ACTION



Binds to muscarinic receptors, causing an increase in secretion of exocrine glands (such as salivary and sweat glands) and increase tone of smooth muscle in gastrointestinal and urinary tracts.

INDICATIONS

Sialogogues can be used in the treatment of xerostomia (the subjective feeling of having a dry mouth),salivary gland hypofunction caused by Sjogren's syndrome, to stimulate any functioning salivary gland tissue to produce more saliva. The risk of caries increases when low levels of saliva are secreted, as it has bactericidal properties. Not only this, but fungal infections such as oral candidiasis also can be a consequence of low salivary flow rates. The buffering effect of saliva is also important, neutralising acids that cause tooth enamel demineralisation.

ADVERSE DRUG REACTIONS

Hypersensitivity, Lung condition such as asthma, Cardiac problems-bradycardia, Epilepsy, Diaphoresis, Muscarinic toxicity, dizziness, headache and confusion.

In some conditions may cause glaucoma.

CONTRAINDICATION

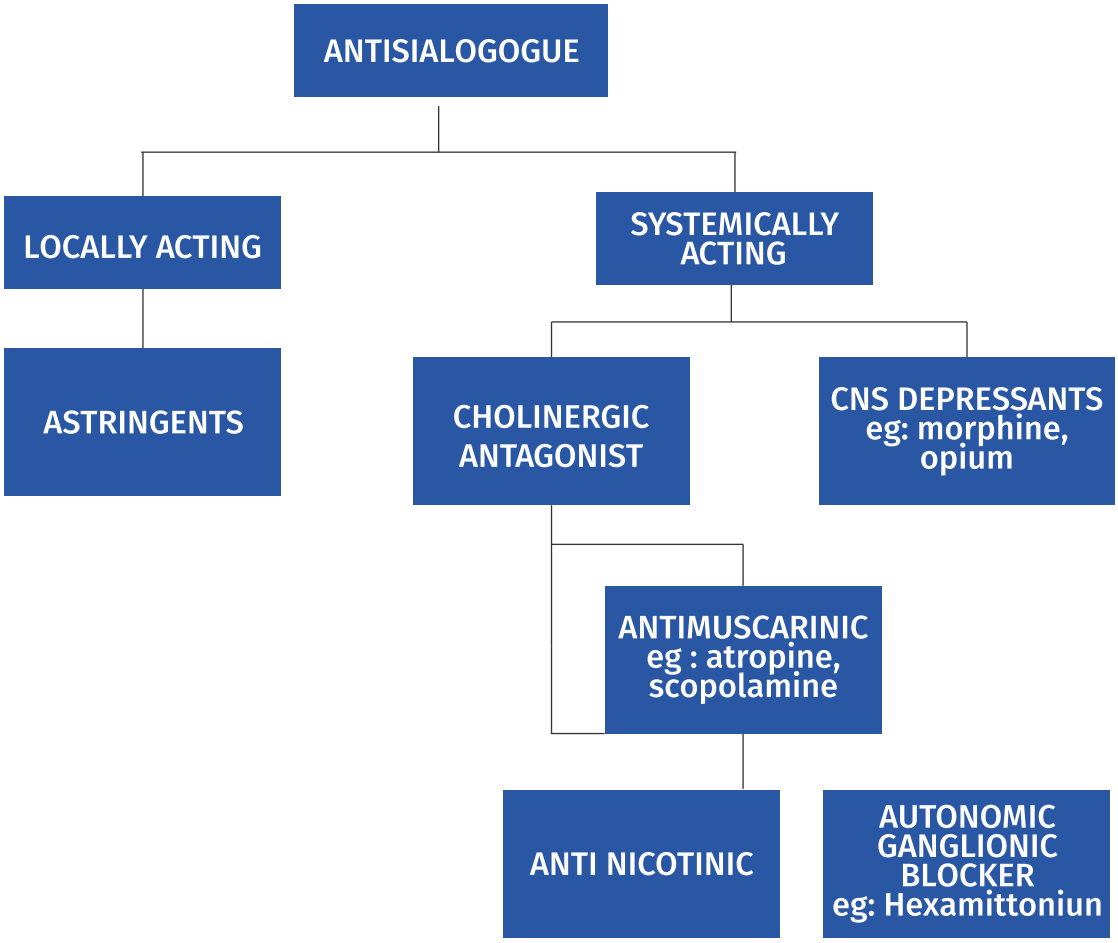
Warning / precautions: use with caution in patients with cardiovascular disease, cholelithiasis, hepatic impairment, nephrolithiasis and respiratory disorders.

MECHANISM OF ACTION

Anti-muscarinic drugs are a class of antisialogogue that works by competitively antagonizing acetylcholine at muscarinic receptors with minimal impact on nicotinic receptors.

INDICATIONS

The relief of symptomatic gastrointestinal disorders, treatment of mydriasis (dilation of pupils) and cycloplegia (paralysis of the ciliary muscle of the eye, resulting in loss of adaptation of the pupil). In COPD , asthma, motion sickness, organo phosphate poisoning, urinary incontinence.



DRUGS

- atropine
- Opium
- Alkalies
- belladonna
- hyoscyamus
- stramonium

ADVERSE DRUG REACTION

• Adverse effects include overactive thyroid gland, myasthenia gravis, a skeletal muscle disorder, closed angle glaucoma ,high blood pressure, coronary artery disease, chronic heart failure, chronic lung disease, fast heartrate, abdominal blockage (pyloric obstruction), worsening urinary retention, and mucus in your airways (viscid bronchial plugs) dry mouth, blurred vision, sensitivity to light, lack of sweating, dizziness, nausea, loss of balance, hypersensitivity reactions (skin rash).

CONCLUSION

Quantitative alterations in salivary secretion are frequent in clinical practice. Their prevalence and negative effects on the patient's quality of life oblige the physician to confront the issue. In recent times, there are numerous, frequently prescribed drugs whose unwanted effects include some kind of salivary disorder; at the same time there is medication for the clinical management of patients with these symptoms. As a result, the physician may feel disorientated by both the large quantity of trigger or influential factors for these disorders with their differing pathogenic mechanisms, and the great variety of existing treatments.

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