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Mouth dissolving film an overview.

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Abstract –

Mouth dissolving film is a rapidly dissolving dosage form that dissolves in the mouth within a few seconds without the intake of water and is mainly used for pediatric and geriatric patients due to its flexibility and patient compliance. The prasent investigation was undertation with the objective of formulating mouth dissolving film of the antiemetic drug domperidene to enhance the convence and conplance by the elderly and pediatrics patient it causes dopamine (D2 and D3) receptor blockage both at the α receptor triager none nad at the gastric level. It shows high first pass metabolism which results it poor bioavailability (10-15%). In view of high first pass metabolism and short plasma half lift it is an idea metabolism and short plasma half life it is an idea candidate for rapid release drug delivery system. The solid dispersion of dameridance were preparation is done.

Introduction –

"A solid dosage form that dissolves or disintegrate quickly in the oral cavity, resulting in or suspension without need for the admistration of water is known as mouth dissolving dosage form. This is also called as orally dissolving film or flash release water."

- Mouth dissolving film drug – delivery system were first developed in late 1970s as based on the technology of the transdermal patch.
- A drug can be administered many different routes to produce a systematic pharmacological effect.
- The most common method of drug administration is the perroral route in which circulation primarily through the members of the small intestine
- Although this type of drug administration is common termed orl.peroral is better term because a administration more accurately describe drug absolute form the mouth it self
- In general, mucosal DDS drug penetrate the mucous membranes by simple diffusion and are carried in the blood, which richly supplied the salivery gland and their ducts, into the systematic circulation tha jugular vein.
- Mucosal drug delivery has lately become a important rout of drug administration
- An alternative to tablet, capsule and syrup for pediatric and geriatric patients who experience difficulties in swallowing traditional oral solid dosage form
- This delivery system consists of a thin film, which is simply placed on the patient tongue who experienced difficulties is swallowing traditional oral solid – dosage form
- Then it rapidly disintegrate and dissolve to release the medication for oral mucosal absorption

Aim- To formulation and evaluation of mouth dissolving film an overview.

Objective –

1) Mouth dissolving film disintegrate or dissolve in saliva and are swallowed without the need for water
2) It is mainly used for pediatric and geriatric patients due to it's flexibility and patients compliances
3) Dose accuracy as compared to syrup.
4) Small size for emprove patients compliance
5) No risk of chocking
6) Rapid onset of action
7) The main objective of oral mouth dissolving film is to provide better bioavailability or drug, to have improved permeability, quickly onset of action as well as improve patient compliance

Plan of work –

***Flow chart of ODFs formulation –**

(Medicine , polymer and excitement mixed)

{ Homogeneous by magnetic stirrer}
|
{ Setting aside for 8 hrs }
|
{Petrol plates casting}
|
{ Hot air drying oven (45-50) degree Celsius}
|
{ Extraction and slicing}

Material and Methods

***Methods**

1) **Solvent casting method -** In this method, firstly the water soluble polymers are dissolved in water at 1,000 rpm and can be heated up to 60°C. …
2)Hot-melt extrusion- In hot melt extrusion method, the initial mass is formed with the help of carriers. …
3)Semi-solid casting – This method is mostly preferred when film ingredient involves acid insoluble polymer. In this firstly, the water soluble polymers are dissolved in water
4)Solid dispersion extrusion- The drug is dissolved in suitable liquid solvent and obtained solution is added to the melt of suitable polymer, obtainable below 70°C without removing the liquid solvent to obtain the solid dispersion. Finally the obtained solid dispersions are shaped into films by means of dyes.
5)Rolling method – In rolling method, both the drug solution and film forming polymer solution are mixed thoroughly and the resultant solution or suspension is subjected to the roller. The solution or suspension should have specific rheological consideration. The film is dried on rollers and cut into desired shapes and sizes

Material –

The mouth dissolving film of Glycopyrrolate was prepared by the solvent casting method. In which Pullulan used as film former. PEG 400 as a plasticizer and flavouring and sweetening agent was added.

Review of literature –

- Yvanne E et al. , compared the efficacy and tolerability of granisteron aldestrone and tropisteron is controlling accure nausea vomity.

- Several large randomised , comparative studies have compared granisteron (2mg single dose, equivalent to 20 mg / kg in a 60 person) with 20 other 5-HT3 antagonist, andansteron and tropisteron (3 mg single dose)

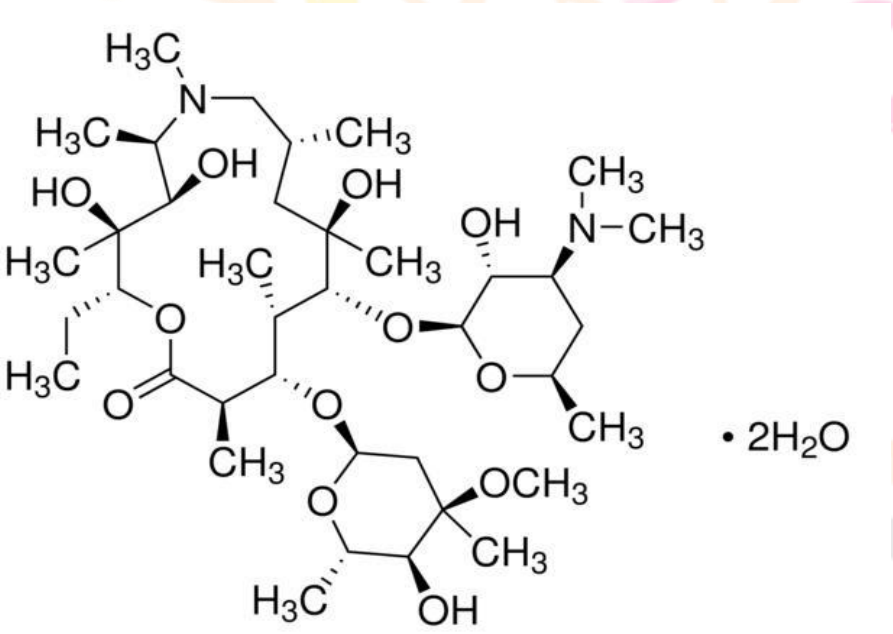
Drug profile –

In this the Azithromycin Dihydrate is used to explain the profile of the drug. It is an example of MDF .

Azithromycin dihydrate-

Molecular weight- 785.02g/mol
Molecular formula – 38H72N2 O12. 2H2O
Melting point – 114°c
Solubility – soluble in ethanol and methanol
Conclusion –

- For the % study metocyclopranide HCL was selected as a model drug condidate as no marketed film of metoclopromide HCl is available in India



- The FTIR study revealed that there were no any considerable change in peak of drug and polymer complex.
- The (λ) max of metoclopromide HCl was found to be 272 nm in phosphate buffer (pH 6.8)
- The fast dissolving oral film prepared by solvent method with different film forming polymer as HPMC -€s , E is , K4m K is as plasticizer.

Result –

- In the result for film forming capacity Tack test and appearance given.
- Film forming capacity was divided in three categories according to these film forming capacity ie good , Better, Best .
- All film prepared were transparent and only 2 batches are found to be tacky

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