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Diploma in Pharmacy 2nd Year
Community Pharmacy & Management
Experiment

To study appropriate handling with correct administration techniques of different types of tablets.

Aim:

To study appropriate handling with correct administration techniques of different types of tablets.

Reference :

‘ Dr. Gupta G.D. , Dr. Sharma Shailesh, Dr. Gupta Richa, “Practical Manual of Community Pharmacy and Management” Published by Nirali Prakashan, Page no 105 – 108

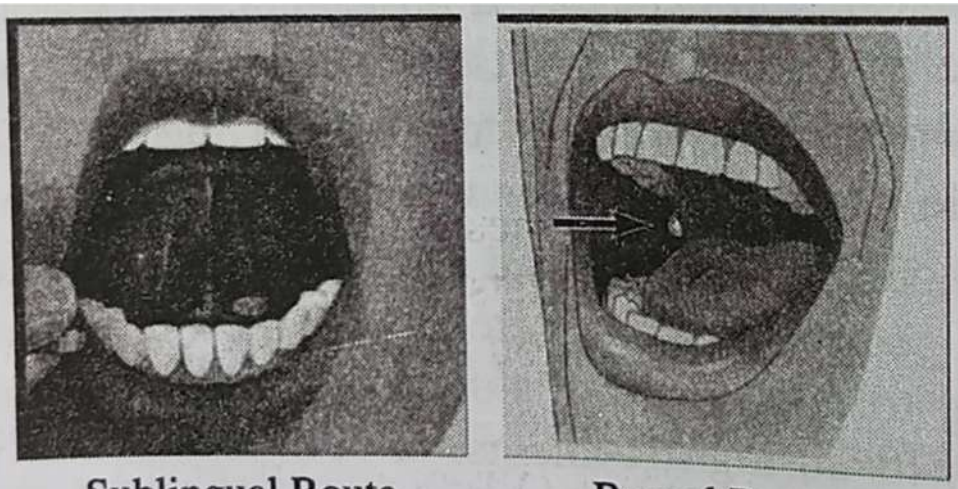
Theory :

Tablets are solid unit dosage form of medicaments with or without suitable diluents and prepared either by moulding or compression. They are solid, flat, or biconvex discs in shape. They vary greatly in shape, size, and weight which depend upon the amount of medicament used and mode of administration.

Types of Tablets

1. **Swallowable Tablets :** Tablets that are taken most frequently are swallowed whole. These tablets break down and release their contents into the gastrointestinal tract.
2. **Effervescent Tablets :** These tablets should not be ingested whole because they are designed to allow for dissolution or dispersion in water prior to delivery.
3. **Chewable Tablets :** When a quicker rate of breakdown and/or buccal absorption is required, chewable tablets are employed. Chewable tablets are made up of the drug scattered throughout a base of saccharide, which adds a slight sweetness.

4. **Buccal and Sublingual Tablets :** Tablets for buccal and sublingual use dissolve in the buccal cavity or under the tongue (sublingual).



Sublingual Route Buccal Route

Figure 19 : Sublingual and Buccal Route of Administering Tablet

5. **Lozenges :** Lozenges are compressed tablets that dissolve slowly and do not have any disintegrant. For local effects in the mouth, some lozenges contain antibiotics or antiseptics (such as benzalkonium). Lozenges, including those containing vitamin supplements, are also utilised for a systemic effect. The inclusion of flavours, sweeteners, and colours makes lozenges edible and organo-leptically appealing.
6. **Coated Tablets :** The majority of tablets are coated for one or more of the reasons listed below :
    i. To avoid the breakdown of drugs that is sensitive to air (oxygen), light, or humidity.
    ii. To reduce the taste of some medications that may occur during partial dissolution in buccal fluids during absorption.
    iii. To make the mouth's surface smoother in order to increase the palatability and ability to swallow.
    iv. To facilitate uniform colour dispersion, a smooth surface texture, and visual appearance and uniformity.
    v. To work as anti-counterfeiting medium by including tracer compounds in the coating materials.

vi. To allow the core of the tablet to contain very powerful compounds and prevent exposure to personnel handling the tablets.
vii. Buccal, sublingual, chewable, effervescent, and dispersible tablets are not coated in order to prevent any delays in the release of the medication caused by the time needed for the coating material to burst or dissolve.

7. **Enteric-coated Tablets :** The coating solution is applied in one or more layers to the enteric-coated tablets. An enteric coating is used to provide resistance to the gastric fluid in the stomach. In the intestinal fluid, drugs release their active components.
8. **Dispersible Tablets :** Dispersible tablets are uncoated pills that consistently dissolve in water. They may also contain safe flavouring and colouring agents
9. **Immediate Release Tablets :** The majority of the tablets (listed above) are immediate release (IR) tablets, which means that upon contact with an aqueous medium, they instantly make all of the drugs available to the dissolution medium. The medicine dissolves at a rate determined by the physicochemical characteristics (such as solubility and particle size) of the drug and the composition of the dissolving medium (such as pH).
10. **Modified Release Tablets :** These types of tablets provide the acute doses required for conventional therapeutic responses, then release medications gradually over a period of time usually 8-12 hours enough to maintain the therapeutic response.
11. **Prolonged Released Tablets :** These are also known as extended-release tablets and sustained-release tablets. These are designed to release their medicament over an extended period of time in a predetermined manner.
12. **Controlled Release Tablets :** Different dosage forms, such as controlled- release (CR) or extended-release (XR) tablets, are intended to slow down or speed up, respectively, the rate at which a medication dissolves in an aqueous media, as compared to IR tablets. The rate of

drug release is thus decreased by CR tablets to a slow, controlled rate, which is normally zero order.

Handling and Administration Technique of Different Types of Tablets

→ Tablets should be swallowed with a glass of water (orange juice, tea or coffee are also commonly suitable). It is important for medications with modified release and enteric coatings in particular because chewing these tablets would render the formulation ineffective. The patient should be informed if taking the tablet on an empty stomach is necessary to ensure the medication is adequately absorbed. Typically, an empty stomach is found at least an hour before or after eating.

Result :

Appropriate handling with correct administration techniques of different types of tablets was studied.

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