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Diploma in Pharmacy 1st Year

Pharmaceutics

Experiment

To study appropriate methods of usage and storage of inhalers.

Aim:

To study appropriate methods of usage and storage of inhalers.

Reference :

‘ Dr. Gupta G.D , Dr. Sharma Shailish , Dr. Sharma Neelam ’
“Practical Manual of Pharmaceutics” Published by Nirali Prakashan, Page
no 113 – 115

Theory :

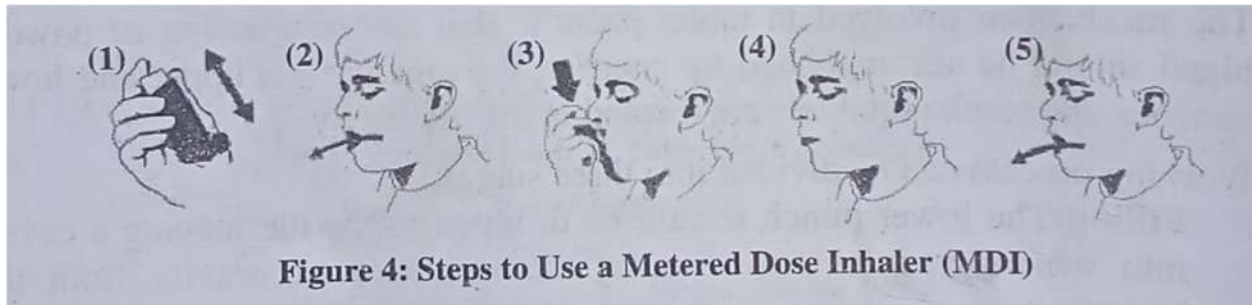
Inhalers are the most common way to take drugs for asthma and Chronic Obstructive Pulmonary Disease (COPD). However, they can only be effective if they are used correctly. When the inhaler is used correctly, the drug is delivered to the lungs, where it can act to relieve the symptoms of the patient. When an inhaler is used incorrectly, just a small amount of medicine reaches the lungs.

Procedure :

Using a Metered Dose Inhaler (MDI)

- 1) Cap should be removed and inhaler should be shaken to ensure consistent delivery of the dose.
- 2) Device should be primed if it is used by the patient for the first time, or if not used for a while.
- 3) A complete breath out should be done
- 4) Slow and steady breathing should be done and the inhaler device should be pressed down.
- 5) While inhalation, the breath should be held till the count of 10.

- 6) Breathing out should be done slowly. the dose should be repeated (if applicable), and mouthpiece cover should be replaced.
- 7) Device should be cleaned after use (if necessary).



Using a Metered Dose Inhaler (MDI) with Spacer

- Cap should be removed and the mouthpiece should be checked whether it is cleaned or not
- To ensure consistent delivery of dose, the inhaler should be shaken properly.
- Device should be primed if it is been used for the first time, or if not used for a while.
- The inhaler mouthpiece should be inserted into the end of the spacer device.
- The complete in and out breathing should be done.
- The inhaler and spacer device should be held between the index finger and thumb.
- The spacer mouthpiece should be placed in the mouth, above the tongue.
- The lips should be closed around the spacer device.
- The head should be tilted back slightly toward the ceiling.
- The top of the inhaler device should be pressed to release a single dose of medicine.
- All of the air should be inhaled slowly, then the breath should be held for te seconds.
- Then the spacer device should be removed exhalation should be done slowly.
- The tidal breathing technique can also be used, where the breathing is done slowly and steadily for four to five times

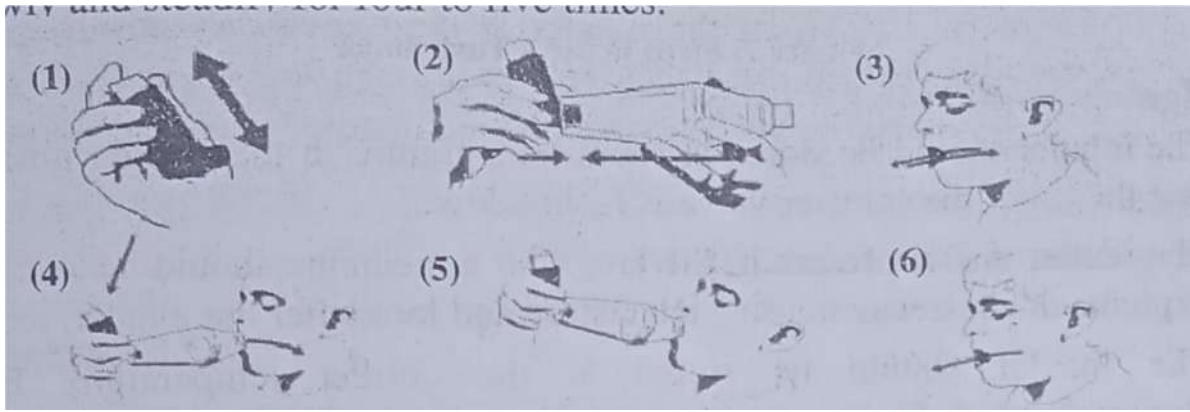


Figure 5: Steps to Use a Metered Dose Inhaler (MDI) with Spacer

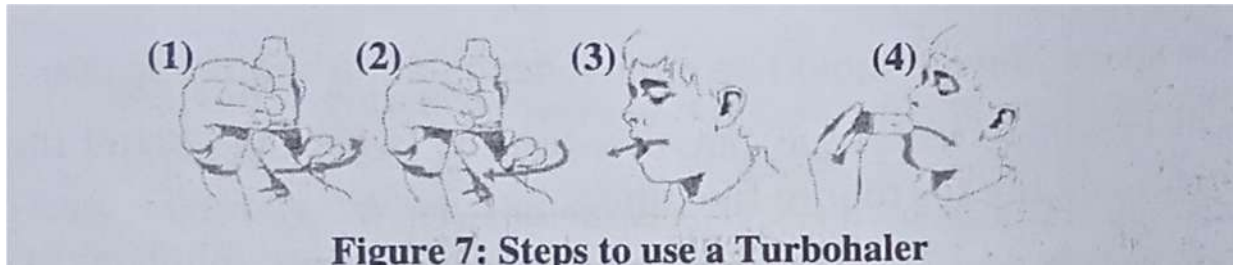
Using an Accuhaler

- 1) The inhaler should be opened by moving sliding lever in the correct direction by holding the device horizontal or upright.
- 2) The complete exhalation should be done but not into the Accuhaler.
- 3) The inhaler device should be placed in the mouth, with the lips forming a tight seal over the mouthpiece, before inhaling quickly and deeply through the inhaler device.
- 4) While inhalation, breath should be held for a count of ten.
- 5) Slowly exhalation should be done.
- 6) Inhaler should be closed correctly by moving sliding lever in the correct direction and the inhaler should be cleaned (if required).

Using a Turnonater

- 1) The cap should be unscrewed (turning anticlockwise) and removed.
- 2) By holding the inhaler upright, the dose should be loaded by turning the coloured base to the right, as far as it will go.
- 3) Then it should be twisted back to the left until it clicks.
- 4) The inhaler is now loaded.
- 5) The exhalation should be done gently, away from the device.
- 6) The device should be held without covering the air inlets, and the tip of the mouthpiece should be placed between the lips and a good seal should be made,
- 7) Inhalation should be done quickly and deeply and breath should be held for 5 to 10 seconds.
- 8) The device should be removed out before breathing out completely.

- 9) The device should be cleaned (if necessary) and the cap and screw it shut should be replaced.



Storage

- 1) The inhaler should be stored at room temperature in the upright position, so that the tip of the canister valve is facing down.
- 2) The leaflet that is present in the box with a medicine should be studied as it explains the best way to use, clean, store and look after the inhaler.
- 3) The inhaler should be stored at the correct temperature. Extreme temperatures or high altitudes can affect the medicine in the inhaler. The label on the inhaler should be checked for storage instructions.
- 4) The inhaler should not be left where it might get too hot or cold (for example in the car or on a sunny window sill).

Result :

The appropriate methods of using and storing the inhalers were studied.