Effect of Counseling on the Patient Inhalation Technique from Meter Dose Inhaler with Spacer

Alaa Ayman, Aya Tarek, Ferial Zakaria, Doaa El Bohy, Mohamed Abdelrahim

Faculty of Pharmacy, Modern Sciences and Arts (MSA) University, Giza, Egypt, Clinical Pharmacy Department, Faculty of Pharmacy, Beni Suef University, Beni Suef, Egypt

Asthma & chronic obstructive pulmonary Diseases (COPD) are the most common lung diseases. They are the most popular lung disease. So good method for control of symptoms will improve patient’s quality of life is inhalation techniques are an important aspects in the management of both diseases. The better the inhalation technique the better the lung deposition of asthma and COPD therapy. This will lead to better control of symptoms and improve adherence to treatment. The following study shows the effect of counseling on patient inhalation technique from Meter Dose Inhaler with Spacer.

The aim of the present work was to provide a proper counseling to the patients to use their MDIs correctly and efficiently, to avoid the drug deposition in mouth, back of throat. Also taking into account the likely compliance and identifying the main crucial errors made by the patients.

Patients were recruited who have different respiratory diseases and use MDIs. Eligible patients who was enrolled in this study were observed through the following check list:

1. Remove the protective cap from mouthpiece of MDI and spacer
2. Check there is nothing inside spacer
3. Shake the MDI
4. Insert the MDI into the spacer- ensure tight seal
5. Breathe out as far as comfortable
6. Place the spacer mouthpiece between the teeth and seal with lips
7. Ensure your tongue does not obstruct the mouthpiece
8. Depress the inhaler to release the dose at the start of inhalation
9. Maintain a slow inhalation rate until the lungs are full
10. Remove the spacer mouthpiece from the mouth and breathe hold for 5-10 seconds
11. If more than one dose each time wait about 30 seconds before the next dose
12. Rinse mouth and if possible brush teeth after dosing
13. Replace cap on MDI

The study was divided into three visits with one week between each two consecutive visits.

First visit:
Observing the patient’s inhalation technique according to the above check list, errors were recorded and teaching them the correct inhalation technique.

Second visit:
Observing and correcting the patient’s inhalation technique and errors were recorded.

Third visit:
Observing the patient’s inhalation technique and errors were recorded.

78 patients (30 female), were counselled through 3 visits with a week between each visit.

Through observing and counseling the patients were able to use the MDIs correctly as the results showed that at visit 1 the total percentage of the error was 29.3% in the all steps while at visit 2 the total percentage of the error in the all steps was 8.9% and at the visit 3 was 1.2%.

There were some steps that have no errors such as steps 1 and step 13 as they were easy and logic to all the patients. Also the results showed that at steps 2, 5, 11 and 12 only 26.6% of the patients did them correctly at visit 1 and increased to 26.9% and 96.5% at visits 2 and 3 respectively.

Hence, increasing the number of counseling visits increased the patient’s compliance to inhalation technique. The appropriate use of inhalation device is very important for response to therapy so it is recommended that patients should be counseled at every opportunity.