Intervention on inhalation technique of rotahaler in patients with chronic obstructive pulmonary disease and asthma

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Inhalation is the preferred route of delivery for drugs intended for both COPD and asthma as drugs are delivered directly to their site of action, leading to a rapid onset of action and a low incidence of side effects. Incorrect technique when taking inhaled medications frequently prevents patients from receiving the maximal benefit from their medications [1].

Thus, prospective interventional study was conducted to evaluate the effectiveness of inhalation techniques of Rotahaler in patients with COPD and Asthma [2,3]. Fifty follow-up cases were taken. The study was conducted in three phases viz. Phase 0 (baseline), Phase 1 (immediate), Phase 2 (follow-up after 1 month). Verbal consent was obtained from patients before enrolling in the study and socio-demographic information of patients was collected by face to face interview. Baseline score of inhalation technique was taken before intervention. Patients were counseled about inhalational techniques of Rotahaler by verbal/physical demonstration. Immediate scoring was done after intervention and follow-up score was taken after one month. The percentage of patients performing the rotahaler technique increases from 61.5% at baseline to 85.50% in immediate and 84.75% in follow up.

A significant difference was observed in mean score of inhalation technique before and after intervention. Based on critical points, only 4% of the patients performed all steps correctly before intervention which increased in immediate to 32% and in follow up to 26%. Hence, intervention on inhaler technique improved the patient knowledge which may contribute to achieve better therapeutic outcome.

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REFERENCES


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**Table**: Percentage of patients performing each step correctly

<table>
<thead>
<tr>
<th>Step</th>
<th>Baseline score</th>
<th>Immediate score</th>
<th>Follow-up score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hold the inhaler with one hand and pull the mouth piece</td>
<td>98%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>2. Take the inhaler capsule, insert the mouthpiece, and place it onto the mouthpiece. A “click” sound indicates proper placement of the device.</td>
<td>80%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>3. Close the mouthpiece firmly. A “click” sound indicates proper placement of the device.</td>
<td>90%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>4. Breathe out fully.</td>
<td>52%</td>
<td>92%</td>
<td>92%</td>
</tr>
<tr>
<td>5. Gap the mouthpiece between your teeth and seal your lips around it.</td>
<td>46%</td>
<td>86%</td>
<td>84%</td>
</tr>
<tr>
<td>6. Sit or stand upright, keeping your head straight and breathing through your mouth as rapidly and deeply as you can. Vibrating sound will be heard.</td>
<td>16%</td>
<td>50%</td>
<td>48%</td>
</tr>
<tr>
<td>7. Hold your breath after that without removing mouthpiece for as long as possible (sec).</td>
<td>88%</td>
<td>94%</td>
<td>92%</td>
</tr>
</tbody>
</table>

**Fig. 1** – Percentage of patients performing each step correctly (A) and critical points missing by patients (B).