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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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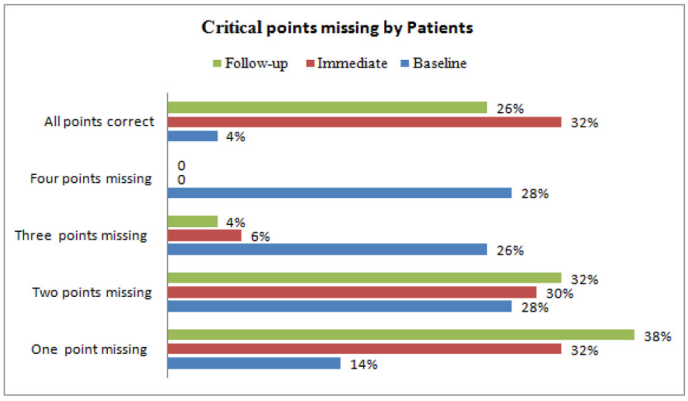
Table : Percentage of patients performing each step correctly

SN.	Steps	Baseline score	Immediate score	Follow-up score
1	Hold the rotahaler at base with one hand pull back the mouth piece	98%	100%	100%
2	Take the rotahaler capsule, insert transparent end first into the raised square hole of the Rotahaler	80%	100%	100%
3	Close the mouth piece firmly. A 'click' sound will indicate proper closing of the device	90%	100%	100%
4	Breathe out fully	20%	62%	62%
5	Grip the mouthpiece between your teeth and seal your lips around it	52%	92%	92%
6	Sit or stand upright, keep your head straight and breathe in through your mouth as rapidly and deeply as you can. Vibrating sound will be heard	46%	86%	84%
7	Hold your breath after that without removing mouthpiece for as long as possible(5sec)	16%	50%	48%
8	Discard the empty capsule and store device in convient carry punch provided	88%	94%	92%

A



B

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

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