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## Background and importance

❑ **Asthma** = a real public health problem

❑ **Inhalation therapy**

➔ **The mainstay** of management of this chronic disease.

❑ Improper inhalation technique : One of the **main reasons** for treatment failure



## Aim and objectives

Demonstrate the most frequent errors in the technique of inhalation in asthmatic children treated in our institution.

## Material and methods

Prospective observational study

Children with asthma admitted to our institution

A period of 2 months

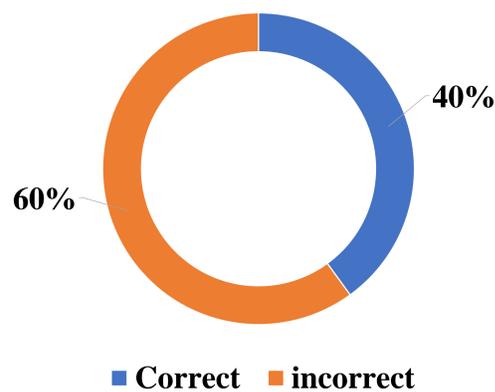


❖ Development of an **evaluation chart** of the inhalation technique

❖ The technique was considered correct when all the steps were carried out correctly.

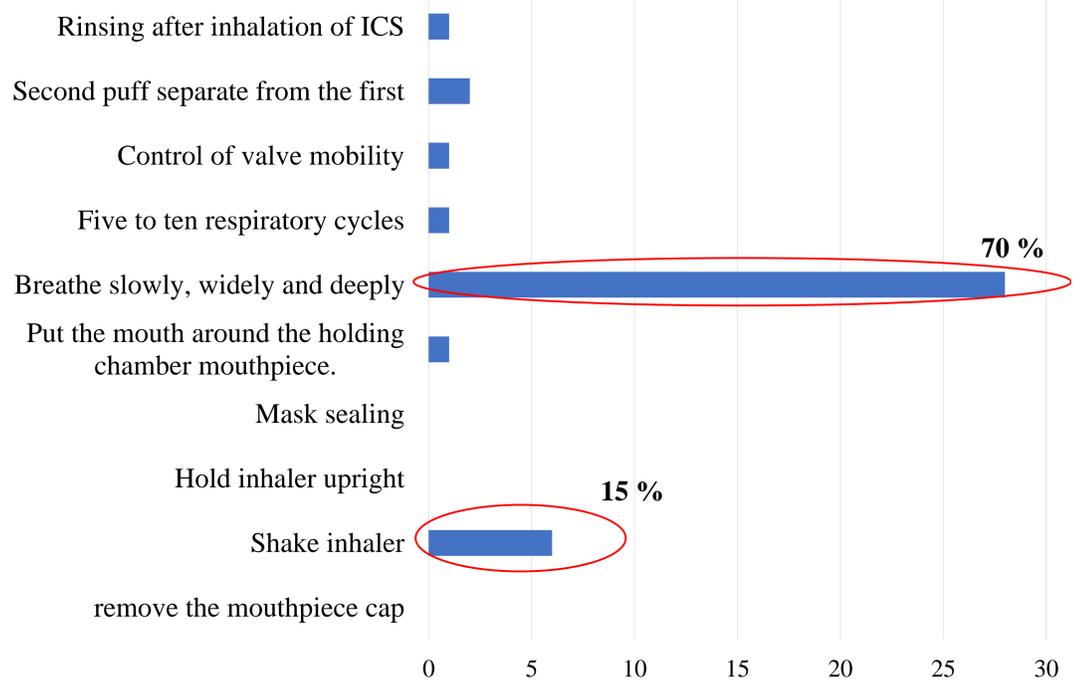


- ✓ **50 patients** were included
- ✓ The average age was **3.7 years**
- ✓ All patients reported **having a demonstration** of the inhalation technique, mainly by their doctor
- ✓ Inhalers observed were **metered-dose inhalers (MDI)**



**Figure 1 :** percentage of patients with an incorrect inhalation technique

## Results



**Figure 2 :** Percentage of mistakes per preparing or breathing technique items

- Overall, 60 % of all asthma patients in our study made at least one essential mistake in their inhalation technique.
- The most essential mistakes in breathing technique: they did not inhale slowly and deeply as recommended by the guidelines (70%) ➔ Most studies confirm the considerable number of patients making inhalation mistakes.
- MDI users most often forgot to shake their inhaler (15%). In line with findings of **Vodoff et al.**[1], the most common mistake was 'No shaking of the MDI' in 51% of the cases.

## Conclusion and relevance

- ❖ Our results confirm the existence of improper inhalation technique in children ➔ adverse consequences on therapeutic efficacy.
- ❖ The educational role of the clinical pharmacist is very important to improve the proper use of the inhalation technique and the management of patients.

## References

[1] **Vodoff MV**, Gilbert B, De Lumley L, Dutau G. Technique d'utilisation de la chambre d'inhalation avec masque facial dans l'asthme. Évaluation chez 60 enfants âgés de moins de quatre ans. Archives de pédiatrie. 2001 Jun 1;8(6):598-603.