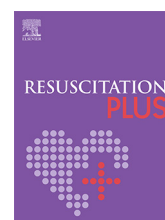


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Letter to the Editor

Paving the way: Exploring the efficacy of anti-choking suction devices in foreign body airway obstruction



To the Editor,

Foreign body airway obstruction (FBAO) is a potentially life-threatening emergency that requires immediate intervention for successful resolution. While conventional airway clearance maneuvers are generally effective, there are cases where these techniques fail, necessitating the use of alternative interventions. Recently, new airway clearance devices (ACDs), usually based on handheld suction and a one-way valve, have become commercially available.^{1–3} However, clinical evidence supporting their use is lacking.⁴ Both the European Resuscitation Council (ERC) and the International Liaison Committee on Resuscitation (ILCOR) guidelines avoid making recommendations for or against their use, based on the lack of evidence in relation to safety, efficacy and training requirements of such devices.^{5,6}

We conducted a retrospective analysis of consecutive cases to evaluate the effectiveness of one of these commercially available ACD devices (Dechoker®) in resolving episodes of FBAO and assess the occurrence of complications associated with its use across day-care and senior residences in Spain. In these centers the Dechoker® device had been deployed since 2018 for the use by healthcare personnel. Demographic information and specific details of the incident were reviewed for each patient. The effectiveness of the device in resolving the FBAO episode was evaluated based on the successful removal of the obstruction and restoration of normal breathing. Additionally, any complications associated with the use of the device were documented.

During the period of October 2018 to March 2023, a total of 35 incidents involving the utilization of the Dechoker® device were documented. Mean age was 81.9 ± 8.7 years, and 43% (15/35) were female. Detailed information regarding the circumstances leading up to the incidents can be found in [Table 1](#). The table also presents data on the type of foreign body involved, the patient's clinical situation, the attending professional and any prior maneuvers attempted.

In 26 out of 35 patients, previous conventional airway clearance techniques such as Heimlich maneuvers were performed and were unsuccessful. The Dechoker® device successfully resolved airway obstruction in 33 out of 35 cases, leading to the restoration of normal breathing. Failure of the device was noted in two cases, one related to bronchoaspiration of liquids and another involving a large foreign body that had to be manually extracted. The types of obstructions encountered varied among the patients and included food particles, small objects,¹ and excessive mucus.¹ Among the study population, only one patient experienced a complication related to the device, specifically teeth damage that occurred during the procedure. After the incident, a total of 3 patients were diagnosed of bronchoaspiration and 7 were derived for hospital evaluation. No other complications were reported.

In conclusion, there seems to be preliminary evidence supporting the effectiveness of the Dechoker® device as a reliable intervention for resolving airway obstructions when conventional maneuvers fail. To validate these findings and determine the optimal sequence for implementing ACDs, it is imperative to conduct additional studies which should be actively encouraged and supported.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Table 1 – FBAO characteristics and outcomes.

Patient characteristics	
Age (years)	81.9 ± 8.7
Sex (Female)	43% (15/35)
Clinical presentation	
Cyanosis	89% (31/35)
Loss of consciousness	31% (11/35)
Abnormal breathing	100% (35/35)
Attending professional	
Nurse	60% (21/35)
Nurse assistant	11% (4/35)
Physician	20% (7/35)
Other	9% (3/35)
Foreign body	
Food	94% (33/35)
Mucus	3% (1/35)
Other	3% (1/35)
Use of Dechoker: outcomes and complications	
Success	94% (33/35)
Previous maneuvers	
Back blows	71% (25/35)
Abdominal thrusts/Heimlich maneuver	74% (26/35)
None	26% (9/35)
Number of suction performed	
1	54% (19/35)
2–3	37% (13/35)
≥4	9% (3/35)
Complications related to the ACD	3% (1/35)
Other complications	
Bronchoaspiration	9% (3/35)
Derived to hospital for evaluation	20% (7/35)
Death	0% (0/35)

FBAO: foreign body airway obstruction; ACD: airway clearance device.

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