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Letter to the Editor

Minimal training for first responders with the i-gel™ leads to successful use in prehospital cardiopulmonary resuscitation



Sir,

In our EMS district, we use the supraglottic i-gel™ (Intersurgical) successfully as first-line airway tool instead of bag-mask ventilation during prehospital cardiopulmonary resuscitation under continuous chest compressions.¹ Additionally, we have also had good experiences with the i-gel™ by difficult airways in trauma patients.²

Because of the rural setting, we work closely with organized first responders (German Red Cross, volunteer firefighter), which allows a

rapid response time and basic medical treatment until the professional EMS arrive and take over the patient care. These first responders have about 500 missions a year and are always alerted when an ambulance is urgently dispatched to the emergency site.

The basic qualification for these first responders is a total of 60 h of training in advanced first aid, including the use of an automated external defibrillator (AED) and the i-gel™. Annual recertification in

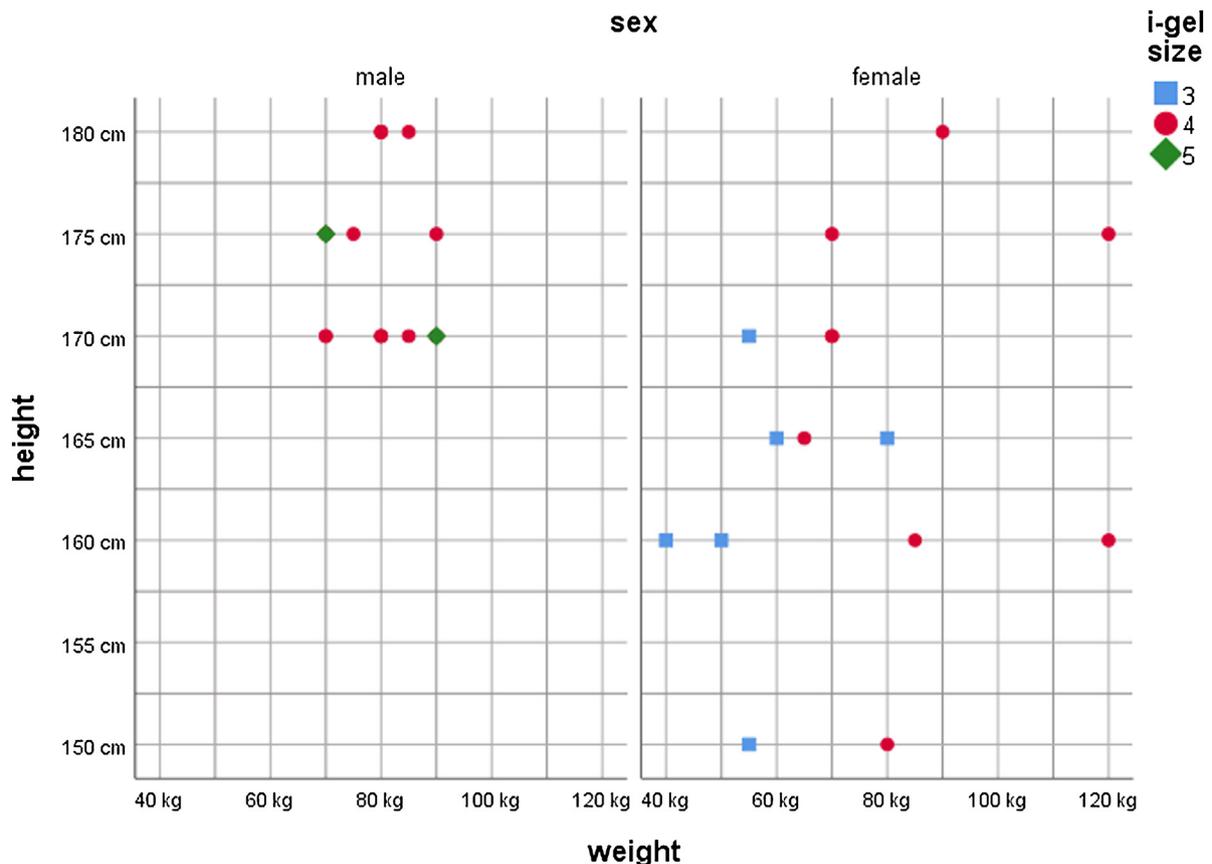


Fig. 1 – The graphic shows the application of the i-gel™, in which the first responder reports successful ventilation. However, there is a wide variation in i-gel™ size, body weight, and height.

basic emergency treatment with AED and i-gel™ is obligatory. The basic training on the use of the i-gel™ takes about 120 min and includes theoretical and practical sequences.

We retrospectively analyzed 59 cases of i-gel™ insertion during CPR by first responders. The mean age of the patients was 75 ± 14 (16–95) years. The weight of the patients was 77 ± 17 kg (40–120 kg), and the mean body height was 171 ± 8 cm (150–180 cm). Gender was given in only 62.7% and corresponded in the males (54.1%) and females (45.9%).

Size 4 was the most commonly used i-gel™ at 71.2% ($n=42$), followed by size 3 (20.3%, $n=12$) and size 5 (8.5%, $n=5$) (Fig. 1).

The i-gel™ could easily be placed in 67.8% ($n=40$) of patients, and slight difficulties were reported in 20.3%. The insertion was difficult in 3.4% and not possible in 8.5% patients. One attempt for a successful insertion was needed in 78.6% ($n=44$), two attempts were needed in 19.6% ($n=11$) and three attempts were needed in 1.8% ($n=1$). Insertion success was not documented in three patients. No leak was reported in 65.4%, a moderate leak with possible ventilation was reported in 28.8%, and a major leak with no possibility to ventilate was in three patients.

Therefore, in a total of five patients, the successful use of the i-gel™ was not possible because of a described swelling of the tongue or pharyngeal space, sometimes with consecutive intubation difficulties. In our analysis, vomiting made insertion difficult, but the patients could be ventilated.

This result shows that even low-skilled users with short, but efficient training can apply the SGA correctly. This is particularly interesting in the context of the error-prone application of laryngeal tubes.^{3,4} The main difference of the i-gel™ from other SGAs is the non-inflatable cuff. In any case, it seems to be useful for bridging, or as an alternative airway tool.⁵

Unfortunately, we are unable to demonstrate the impact of our first responders on patient outcome. Nevertheless, we can show that only a short training session was necessary for effective use of the i-gel™ in prehospital cardiopulmonary resuscitation.

Conflict of interest statement

None.

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