ResMed Mask Facilitates Effective Ventilation in Simulated Respiratory Arrest

Compared with a standard mask, the ResMed mask produced higher tidal volumes during BVM ventilation.

Bag-valve-mask (BVM) ventilation is an essential resuscitation skill that can be difficult to perform adequately. In a prospective, randomized crossover study involving 30 emergency medical technicians (EMTs) in South Korea, researchers compared performance of a standard mask and a continuous positive airway pressure mask (ResMed, Bella Vista, NSW, Australia) for simulated out-of-hospital, single-rescuer BVM ventilation in manikins. EMTs received a 15-minute hands-on lecture on use of the ResMed mask followed by a brief practice session.

The ResMed mask produced significantly higher mean tidal volume than a standard mask (452 mL vs. 394 mL), a higher proportion of successful volume deliveries (65% vs. 27%), and higher peak airway pressure (10.2 vs. 9.6 cm H$_2$O). Stomach insufflation was not observed with either technique. EMTs rated the ResMed mask significantly easier to use, and all but one preferred the ResMed mask for BVM ventilation.

Comment: Ventilation is an even more critical skill than intubation. Clinicians should evaluate the ResMed for use in their practice settings.

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