



CORRESPONDENCE

## Using surgical gloves to ventilate a patient

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### To the Editor,

A seven-year-old 21 kg patient with hydrocephalus was anesthetized for insertion of a ventriculoperitoneal shunt. The patient's trachea was intubated with a 5.5 mm internal diameter cuffed endotracheal tube and the lungs were ventilated using the anesthesia workstation (AWS) ventilator (Datex Ohmeda Aestiva®/5; GE healthcare, Helsinki, Finland). Approximately 30 min into the procedure, the ventilator failed, which necessitated switching to manual ventilation using the pediatric reservoir bag of the AWS circle system. Nevertheless, the bag developed a tear making ventilation once again impossible. The patient was then manually ventilated with a stand-alone self-inflating bag valve breathing unit. While a replacement bag for the AWS was being located, a size 7 sterile surgical glove (SyanaCare; Syana India Associates, India) was adapted as a makeshift ventilating bag. We placed one glove at the end of ventilator tubing and used the other glove to tightly tie the first glove to the circuit

tubing (Figure). We managed to maintain adequate tidal volume and minute ventilation until a new AWS bag was found.

Sudden mechanical breakdowns in the AWS continue to be reported.<sup>1,2</sup> Although a replacement bag should always be readily available, the use of a surgical glove can serve as an improvised and makeshift temporary replacement (perhaps an example of “MacGyvering”).<sup>3</sup> We do caution that surgical gloves may not provide sufficient inspiratory pressures in adults, so this replacement is likely only possible in those with low lung and chest wall compliance.

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**Figure** A torn reservoir bag from the anesthesia workstation circle system has been replaced with a surgical glove serving as an improvised makeshift ventilating bag. This is a potential, though temporary, solution until a more appropriate replacement can be located.



**Conflicts of interest** None declared.

**Editorial responsibility** This submission was handled by Dr. Hilary P. Grocott, Editor-in-Chief, *Canadian Journal of Anesthesia*.

## References

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