

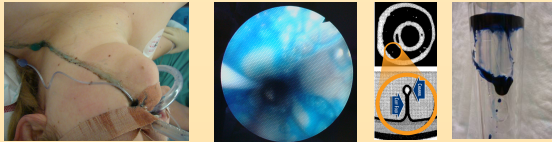
Jan P Mulier, M.D. Ph.D.<sup>1,2</sup>, Filip Vandenbrande, M.D.<sup>1</sup>, Philippe Van Lancker, M.D.<sup>1</sup>, Bruno Dillemans, M.D.<sup>3</sup> and Sebastiaan Van Cauwenberge, M.D.<sup>3</sup>

1. Dep of Anesthesia, University hospitals, KU Leuven, Leuven, Belgium ,
2. Dep of Anaesthesiology, Sint JAN Brugge-Oostende, Bruges, Belgium
3. Dep of General surgery, Sint Jan Brugge-Oostende, Bruges, Belgium

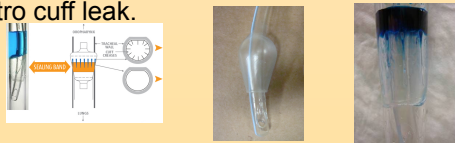
Contact Email: jan.mulier@azbrugge.be  
More info: www.publicationslist.com/jan.mulier

### Background and Goal of Study

After a standard gastric bypass operation (1) methylene blue water is injected in the gastric pouch to identify any staple leak. This fluid returns in the oral cavity and might leak beyond the tracheal cuff causing silent aspiration.

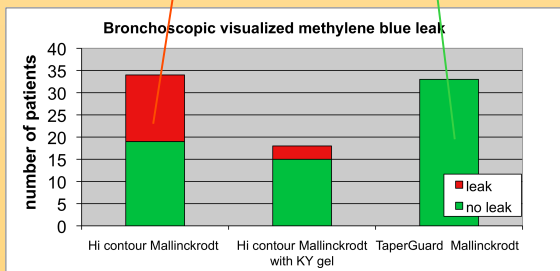
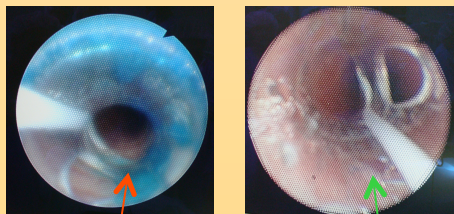


Overflow after test above cuff plica Hi-Lo cuff  
A new tapered endotracheal cuff is developed by Covidien with no plica at one level preventing in vitro cuff leak.



### Results

3 patients were excluded as no methylene blue was visualised above the cuff.



### Materials and Methods

- 85 Patients with a BMI above 40 and scheduled for a gastric bypass



- Hi-Lo cuff
- Hi-Lo cuff with gel taperguard cuff
- VCV or PCV with 5 to 10 cm peep.
- Patient informed consent and approval by the ethical committee.
- cuff pressure was automatically controlled between 25 and 30 cmH20 for the whole procedure.
- 2 ml Methylene blue is diluted in 150 ml water and used to perform the leak test after the gastric bypass.
- 10 to 30 minutes after this surgical evaluation the tracheal tube is inspected above and below the cuff by bronchoscopy.
- Silent aspiration is defined when methylene blue is visualized below the tracheal cuff.
- Patient is excluded if no methylene blue is visualized above the tracheal cuff.

### Discussion

- With no gel fluid leaks very fast through the cuff plica below the cuff.
- Gel protects but not in every patient.
- Peep does not protect
- The incidence for procedures longer than 1 one is not investigated.

### Conclusion

Gel protects partly while taperguard protects every patient against silent cuff aspiration.

### References:

1. Dillemans et al, Obes Surg 19: 1355-64
2. Dullenkopf et al. ICM 2003; 29:1849