

A new technique to reduce the risk of aerosolization in percutaneous tracheostomy

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Background

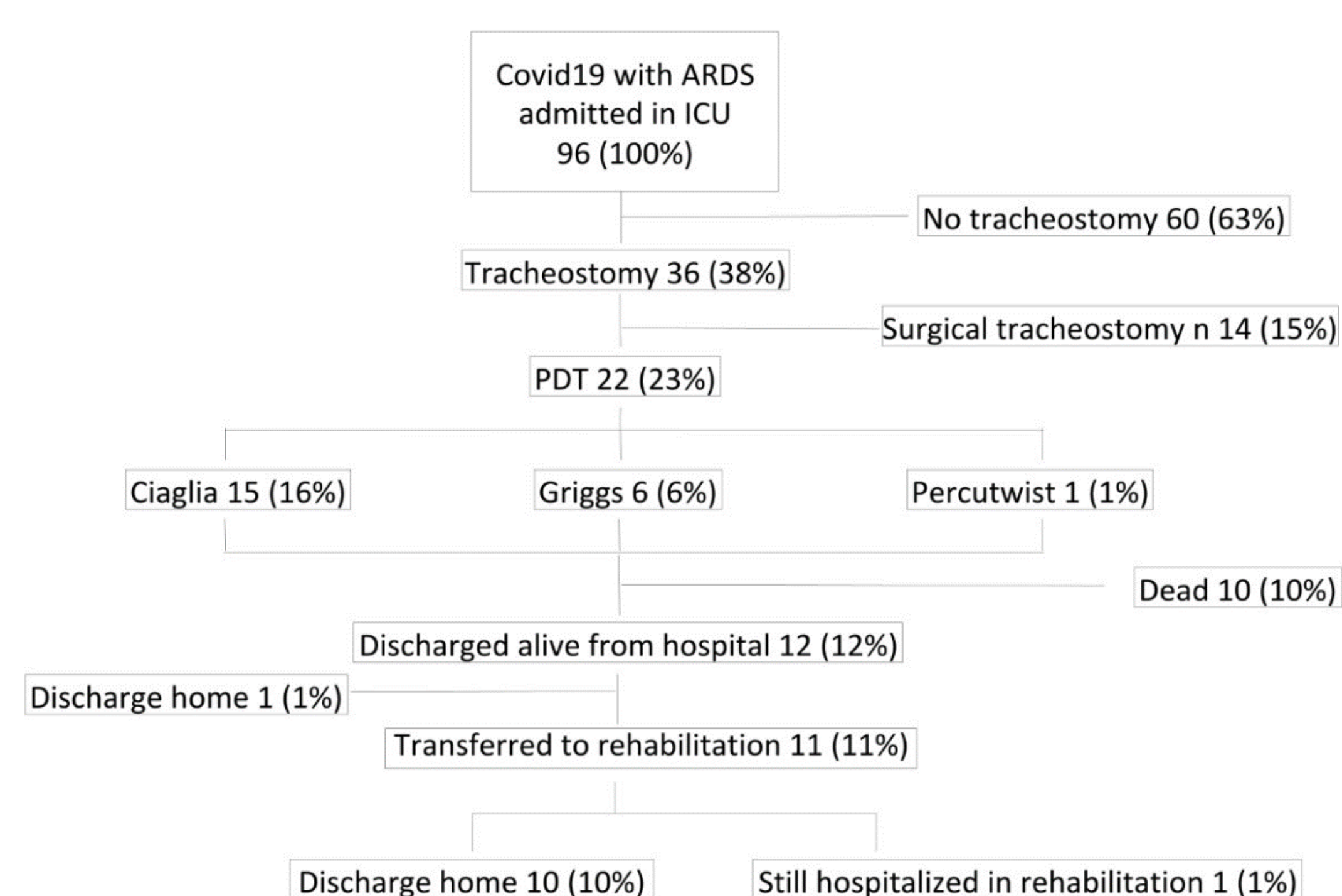
Percutaneous dilation tracheostomy is an Aerosol Generating Procedure carrying infectious risk. For this reason, during the COVID19 outbreak surgical tracheostomy was preferred despite the technique related complications increased risk.

Methods

We describe a new sequence for percutaneous dilation tracheostomy procedure considered safe both for patients and healthcare personnel. A fiberscope was connected to a video unit to allow bronchoscopy. Guidewire positioning was performed as usual. While the established standard procedure continues with the creation of the stoma without any change in mechanical ventilation, we retracted the bronchoscope until immediately after the access valve in the mount tube, allowing normal ventilation. After 3 minutes of ventilation with 100% oxygen, mechanical ventilation was stopped without disconnecting the circuit. During apnea the stoma was created by dilating the trachea and the tracheostomy cannula was inserted. Ventilation was then resumed. We evaluated the safeness of the procedure by recording any severe desaturation and by performing serological tests.

Results

Thirty-six patients (38%) over 96 underwent tracheostomy: 22 (23%) percutaneous dilation tracheostomies with the new approach were performed without any desaturation. All personnel (150 operators) was evaluated for serological testing: 9 (6%) had positive serology but none of them had participated in tracheostomy procedures.



Conclusions

This newly described percutaneous dilation tracheostomy technique was not related to severe desaturation events and we did not observe any positive serological test in health workers who performed the tracheostomies.

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