

Percutaneous dilatational tracheostomy versus surgical tracheostomy in critically ill patients

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Abstract

Background: Percutaneous dilatational tracheostomy (PDT) has been recognized as a reliable alternative to the surgical tracheostomy (ST) in patients with persistent respiratory failure due to various medical conditions.

Objectives: to compare the safety and complications of ST versus PDT.

Methods: A prospective non-randomized study was conducted on (50) patients between Jan. 2008 - Jan. 2011. Patients were divided into two groups; group (A) included (25) patients who underwent PDT in Kasr El-Aini Hospital, ICU and group (B) included (25) patients who underwent ST in Fayoum University Hospital, ICU. All tracheostomies in this study were performed electively; none were emergent. All patients were at least 18 years of age and required a tracheostomy for prolonged ventilatory support, airway protection or facilitation of weaning from the ventilator.

Results: PDT was performed in 8.28 ± 1.06 min vs 18 ± 3.89 min for ST ($p < 0.0001$). There was no significant difference between the two groups in lowest intraprocedural systolic BP (mm Hg) & lowest SaO₂%. (P value > 0.05). Statistically insignificant correlation between the two groups regarding intraprocedural Complications; 32% for PDT vs 20% for ST (P value > 0.05); while statistically significant correlation between the two groups regarding postprocedural Complications; 12% for PDT vs 36% for ST (P value < 0.05).

Conclusion: Both percutaneous and surgical tracheostomies have overall a low incidence of complications. There is a lower incidence of intraprocedural complications when inserted surgically; although statistically insignificant. There is a lower incidence of postprocedural complications when inserted via the percutaneous route. PDT should be considered the procedure of choice for performing elective tracheostomies in critically ill adult patients.

Key words: ST - PDT - complications - intensive care.