

# Performing Percutaneous Dilational Tracheostomy without using Fiberoptic Bronchoscope

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**Background:** Percutaneous tracheostomy is an elective method that is increasingly being taken up in the intensive care unit alongside the patient's bed. In many centers, bronchoscopy is used, but the necessity of using bronchoscopy in percutaneous tracheostomy has not yet been determined. Discontinuing use of bronchoscopy can potentially reduce the cost and increase the efficiency of percutaneous tracheostomy. Therefore, in this study, we performed a percutaneous dilational tracheostomy without using fiberoptic bronchoscopy.

**Materials and Methods:** This study was performed as a descriptive epidemiological survey among 70 patients in Shahid Rajaei Hospital of Qazvin in 2015 and 2016. The results were assessed in the patients.

**Results:** In this study, pneumothorax, trauma, major and minor bleeding, cuff leak and change to surgical procedures as well as accidental extubation were not seen. However, subcutaneous emphysema, mal-position and hypoxia each were seen in one patient (1.4%).

**Conclusion:** Totally the results demonstrated that percutaneous dilatation tracheostomy without fiberoptic bronchoscopic guidance is useful and safe.

**Key words:** Percutaneous dilatation tracheostomy; fiberoptic bronchoscopic guidance; Outcomes

## INTRODUCTION

Tracheostomy is one of airway management options in patients who need long term ventilation and airway protection (1).

Percutaneous (dilational) tracheostomy (PDT) was first presented by Sheldon in 1957 and years later added as a substitute to surgical tracheostomy (ST) in intensive care units (ICUs). With the daily advancement of this technique (PDT) and the use of advanced tools, this technique is gradually performed as a standard open surgery technique in the operating room (2).

Tracheostomy consists of opening the trachea from anterior cervical region and communicating tracheal space to outside by a plastic or metal cannula. It is a common surgical procedure especially in traumatic patients and those who are under mechanical ventilation for a long time. It is usually done in two ways; Percutaneous Dilational Tracheostomy (PDT) and Surgical Tracheostomy (3, 4). Although PDT method is faster and easier, it needs to be converted to open surgery in 7 percent of cases (3). The physician experience should not be neglected that clearly reduces complications of either method (5).