

**Percutaneous Tracheostomy after Cardiac Surgery:  
Last Resort for Complicated Patient or a Well Timed Procedure?**

**Roni Ben Avi<sup>1</sup>, Alon Ben Nun<sup>1</sup>, David Simansky<sup>1</sup>, Nonna Zeitlin<sup>1</sup>, Ehud Raanani<sup>2</sup>,  
Alexander Kogan<sup>2</sup>**

<sup>1</sup>*Department of Thoracic Surgery, Sheba Medical Center, Israel*

<sup>2</sup>*Department of Cardiac Surgery, Sheba Medical Center, Israel*

**Background:**

The best time to perform a tracheostomy in cardiac surgery patients who require prolonged postoperative mechanical ventilation remains unknown. The primary aim of this investigation was to determine if timing of tracheostomy had influence on patient outcome.

**Methods:**

We conducted a retrospective review of prospectively collected patient information obtained from our departmental database on adult patients recovering from coronary artery bypass grafting and/or valve surgery. Patients were divided into 2 groups based on the timing of their tracheostomy: early (less than 14 days) and late (14 to 28 days). The primary outcomes measures were in-hospital mortality, ICU stay and hospital stay. We used T-test and Chi-Square to evaluate the variables affecting the outcome.

**Results:**

During the last 5,5 years between January 2007 till June 2012 a total number of 3783 patients underwent heart surgery in our hospital. Of those a total number of 123 (3.25%) patients needed a tracheostomy on the post operative period. Of a total in-hospital mortality rate was 49%; the median survival period was 99 days. Delayed tracheostomy led to longer total ICU time (R=0.461, P0.000) and hospital stay (R=0.339, P0.000).

**Conclusion:**

Tracheostomy for patients after cardiac surgery may be a grim outcome, the respiratory failure is often the endpoint of a complicated physiological state of the patients. Timing may be of great importance since patients with early tracheostomy had shorter hospitalization periods. The overall survival rate after tracheostomy may be use as quality assessment parameter.