



## PITS Data Registry

### Introduction

Despite the improvement of the tracheal intubation technique, there are still major complications. Tracheal stenosis is one of the most serious post ICU complications. During the intubation, direct pressure of the cuff or the tip of the tube on the mucosa and the subsequent ischemia seems to launch an inflammatory process that leads to mucosal edema, granulation tissue formation, fibrosis, and finally, cartilage destruction; all end with tracheal stenosis after extubation. The patients with tracheal stenosis usually return to hospitals a couple of weeks after extubation for progressive dyspnea and stridor. Many of them are treated as asthma or respiratory infections. More unluckily, some of them also undergo tracheostomy before correct diagnosis. The airway of patients should be temporarily kept open by repeated bronchoscopic dilation under general anesthesia, and airway resection and reconstruction would finally be required, if feasible. As there was not any data registry for the patients with tracheal stenosis in Iran, the researchers in Tracheal Diseases Research Center have performed that over the years (from 2000) and registered over 2500 patients by now. The data of the registered patients would be used for the prevention of tracheal stenosis and improvement of treatment and decreasing mortality and death. All information about Demography, diagnosis, treatment, complications and long term follow-up in the patients with post-intubation tracheal stenosis are collected and entered into the database.

### Objectives of Registry

Incidence and prevalence rate estimation; Risk factors assessment of PITS; Screening of the patients with PITS; Long term follow-up program implementation; Patients education; Nonrelevant specialties, nurses and general physicians education; Improvement of surgical and nonsurgical treatment; Improvement of ICU care for intubated patients, Diminishing and management of complications, Publishing articles, Attending in international and national conferences.



## **Research goals:**

National and international collaborative research goals  
Incidence estimation of PITS in Iran and other countries  
Prevalence determination of PITS in Iran and other countries  
Risk factors assessment of PITS in Iran and other countries  
Interventional study for the diminishing of PITS risk factors and decreasing the incidence rate  
To classify ICU discharged patients based on their follow-ups for Post-Intubation Tracheal Stenosis screening  
To identify modules of a mobile-based follow-up system for post-intubation tracheal stenosis  
Evidence-based clinical guidelines for prevention, treatment and screening of PITS  
Registry

## **guideline**

In order to data registry of the patients with tracheal stenosis or ICU discharged patients in pursue of prevention of tracheal stenosis and improvement of treatment means, the discharged ICU patients who have more than 24 hours of intubation are active followed-up three months after extubation if they have no warning symptoms. The patients are educated to return the clinic for further evaluation as soon as having symptoms that rigid bronchoscopy is performed and all bronchoscopic characteristics are documented. All demographic information, history of intubation and the stenosis, resectional and nonresectional procedures, post-operation complications are documented and registered in a designed questionnaire. The questionnaire is semi-structured and has already been validated. After that, all collected data are entered into statistical software. A licensed nurse has been trained for data entry, and a general physician is in charge of data management and quality insurance. The trainee reviews the patients' charts before the patients are discharged from the hospital. The patients with tracheal stenosis after treatment either airway resection or non- resectional treatment should also be followed-up. The surgeried patients return to the clinic after one month. They are visited for evaluation of the anastomotic site and probable complications through rigid or fiberoptic bronchoscopy. All information is documented. The patients who underwent nonresectional procedures and temporary treatment are followed up based on surgeons' professional opinion.