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**EP10****SUBGLOTTIC STENOSIS IN CHILDREN: SERIAL CASES OF CHILDREN UNDER 2 YEARS OLD**R. Fauzie<sup>1</sup>, M.A Tirtosudiro<sup>2</sup>, H.M. Nataprawira<sup>2</sup><sup>1</sup> Harapan Kita National Women and Children Health Center / Department of Child Health, Jakarta<sup>2</sup> Hasan Sadikin General Hospital/ Department of Child Health, Faculty of Medicine, Universitas Padjadjaran, Bandung**Background**

The most common cause of acquired Subglottic Stenosis (SGS), narrowing of the subglottic, is prolonged endotracheal intubation. Respiratory distress accompanied by biphasic stridor in children with history of endotracheal intubation should prompt investigation for SGS. We present two SGS cases of children treated by trans-bronchoscopy laser cauterization combined with balloon dilatation with good result.

**Case Report****Case 1**

A 21-month-old child, presented with respiratory distress, difficulty in feeding, and biphasic stridor. The child had a history of 2 weeks of endotracheal intubation. The patient then developed complaints in 2 weeks. Physical examination showed tachypnea, decreased room air oxygen saturation, chest retractions, with biphasic stridor. No abnormality showed in the laboratory nor radiological examination. Flexible bronchoscopy (FB) evaluation showed grade III (70%) Myers-Cotton obstruction. Laser cauterization followed by balloon dilatation was performed. The patient showed no recurrency.

**Case 2**

A 19-month-old child with a history of 2 weeks endotracheal intubation, developed biphasic stridor in a week after, followed by gradually increasing respiratory distress. The patient was admitted 8 times in different hospitals within the next 2 months. The patient was admitted to our hospital, and on physical examination showed similar complaints as in the first case. No abnormality was shown on laboratory and radiological examination. FB evaluation showed grade III (90%) Myers-Cotton obstruction. Laser cauterization followed by balloon dilatation was performed, no recurrency was documented.

### **Conclusion**

Children with stridor and history suspicious of SGS should prompt immediate investigation. Trans-bronchoscopy laser cauterization followed by balloon dilatation showed good result with no recurrency documented.

## **BRONCHOSCOPIC MANAGEMENT OF MALIGNANT DISTAL AIRWAY OBSTRUCTION WITH SELF EXPANDING METALLIC Y STENTS – CASE SERIES**

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### **Background**

Central airway obstruction caused by malignancy is an emergency indication for deploying the tracheal stents. Distal airway obstruction at the level of carina associated with right and left main bronchus narrowing is managed by deploying Y SEMS. In this case series we discuss about 4 patients who presented with acute breathlessness with stridor and utility of fully Y SEMS in managing the patients.

### **Case Report**

Case 1: 65/M case of CA lung with Grade 4 mMRC and stridor, k/c/o COPD and post covid. Bronchoscopic evaluation: infiltration of the tumor in distal end of trachea with 90% luminal narrowing and complete obstruction of the left main bronchus. Rigid bronchoscopy guided tumor debulking done with electrosurgical procedures and Self expanding Y SEMS deployment done. He was extubated post procedure, had immediate symptomatic relief and managed with Nebulized bronchodilator in view of COPD and post covid lung. **Case 2:** 40/F case of CA cervix treated 5 years back presented with stridor, HRCT thorax: enlarged subcarinal node compressing the carina. Bronchoscopy : extrinsic compression in the carina with 80% luminal narrowing of the right and left main bronchus. Self expanding Y SEMS deployment done, patient had immediate symptomatic relief. **Case 3 and Case 4:** CA esophagus with extrinsic compression in the posterior wall and infiltration of trachea. bronchoscopy :endoluminal obstruction with TEF. Emergency Y SEMS deployment done. All patients extubated on table with immediate symptomatic improvement. The common complication faced in the fully covered Y SEMS are increased secretion, granulation tissue in distal end of stent. Median survival of patients: (30-150 Days), with No immediate procedure related mortality.

### **Conclusion**

Distal central airway obstruction are emergency conditions where achieving the luminal patency and maintaining the airway when there is significant extrinsic compression helps to take up the patient for Palliative RT and chemotherapy by improving the performance status. Common complications like increased secretions and formation of distal granulation tissue can be managed by surveillance

bronchoscopy and nebulized mucolytics and expectorants. Fully covered Y SEMS can be deployed with rigid bronchoscopy guided / through LMA by fluoroscopy guidance as emergency procedure which will have significant symptomatic benefit.

## NEBULIZED CIPROFLOXACIN/DEXAMETHASONE (CD) IN CONGENITAL TRACHEAL STENOSIS POST SLIDE TRACHEOPLASTY

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### Background

Tracheobronchial obstruction by granulation tissue can compromise the postoperative course in airway interventions. The use of inhaled CD has been described to decrease granulation tissue at the surgical site. The combination of Ciprofloxacin and Dexamethasone decreases the bacterial load and inflammatory response leading to reduction in granulation tissue formation. The purpose of this case reports is to illustrate the outcome of tracheoplasty with and without using postoperative nebulized CD.

### Case Report

We report 3 cases of congenital tracheal stenosis post tracheoplasty with and without using nebulized CD.

Case 1 is a 3-month-old girl with congenital tracheobronchial stenosis who had undergone slide tracheoplasty at 2 months old. Postoperatively she was not given nebulized CD and bronchoscopy findings showed granulation tissues at tracheal surgical site. She was ventilated for 4 weeks and NIV dependent until now.

Case 2 is a 2-year-7-month-old boy with left pulmonary sling with congenital tracheal stenosis post slide tracheoplasty with concomitant repair of the vascular ring. Nebulized CD was given postoperatively for a total of 5 days. Repeat bronchoscopy post treatment showed very minimal granulation tissue. He was discharged at day 9 postoperatively without any respiratory support.

Case 3 is a 14-month-old boy with PDA and ASD in failure and tracheal stenosis with distal tracheomalacia post slide tracheoplasty and cardiac repair. Day 5 post-operative bronchoscopy revealed the surgical site exposed to nebulized CD had minimal granulation tissue compared to the unexposed surgical site stented by ETT. He was on nebulized CD until 2 weeks postoperatively and successfully weaned off from non-invasive support.

## **Conclusion**

This is the first case report to describe the use of nebulized CD in our setting. Our cases demonstrate reportable data on its effectiveness post slide tracheoplasty. A randomized controlled study is warranted to describe its clinical benefits.

## EXPERIENCE WITH DRY MEDICAL THORACOSCOPY VIA VERESS NEEDLE: A CASE SERIES ANALYSIS

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### Background

The diagnostic yield of challenging pleural biopsies has improved leaps and bounds with the advent of medical thoracoscopy (MT). However, MT cannot be performed safely in a subset of patients with minimal to no pleural effusion. This has led to the emergence of dry MT via various instruments including Veress needle, which is traditionally used to induce pneumoperitoneum prior to laparoscopic surgeries.

### Case Series

#### Case-1

A 66-year-old housewife presented with a 2-month history of lower back pain. Computed tomography (CT) showed multilevel vertebral metastatic lesions and a left upper lobe lung mass. Biopsy of lung and vertebral lesions were deemed unsuitable due to injury risks to adjacent neurovascular structures. Bedside thoracic ultrasound (TUS) confirmed lung sliding sign with minimal effusion. A Veress needle was introduced into pleural space and insufflated with 200mL of air prior to performing MT. Multiple nodules were visualized on parietal pleura with biopsy samples confirming metastatic lung adenocarcinoma (EGFR mutation positive). She was commenced on gefitinib by oncology.

#### Case-2

A 70-year-old gentleman with history of resected sigmoid colon adenocarcinoma was referred for a right upper lobe lung mass, incidentally noted during CT surveillance. Bedside TUS showed sliding sign with minimal effusion. MT was successfully performed after Veress needle insertion followed by air insufflation. Pleural biopsy samples showed evidence of metastatic lung adenocarcinoma. He was promptly referred to oncology for chemotherapy.

#### Case-3

A 76-year-old gentleman with history of prostate cancer presented with dyspnoea. CT showed a right pleural based lesion with minimal pleural effusion. He successfully underwent MT after induction of pneumothorax with Veress needle. Biopsy results are pending at the time of writing.

## **Conclusion**

Our early experience confirmed Veress needle MT as a relatively easy and safe modality for access to previously challenging pleural pathologies. We hope that this technique will allow earlier disease detection, better diagnostic yield, and ultimately better patient outcome.