National grandround of Pulmonolgy

1402.12.17

Tracheal stenosis

- The topic dose not include subglottis
- Subglottis is the area within cricoid ring from the bottom of the vocal cords to the top of first tracheal ring, 1-2 cm vertical,1.5-2 cm in diameter
- Intubation, reflux and autoimmune disease the main causes of subglottic stenosis

Cervical tracheal stenosis

- Endotracheal intubation, tracheotomy
- Deep repetitive suctioning
- Endotracheal tube movement
- Diagnosis by PMH, surgical history, autoimmune disease,flow volume loops and definite diagnosis by endoscopic examination of airway

Treatment

- Surgery the primary mode of treatment, either bronchoscope or open surgery
- Adjunctive agents, such as steroid injection, inhibitors of fibroblast activity inhibitors such as mitomycin c depends on the nature of stenosis
- Diagnosis and treatment begins with an endoscopic approach
- The main point is not to make more injury and damage to the cartilage

Treatment

- Short segments stenosis <1.5 cm, occludes less than 50 % of tracheal lumen
- Primarily soft tissue in nature
- Responds to incision,dilatation by rigid bronchoscopy or balloon dilatation
- Precaution must be exerted when using laser for incision not to further damage of tracheal cartilage
- Judgment on the amount of dilatation that the area willaccept

- If the strictures are short stenotic segments and web like, dilatation techniques usually works after 1 or 2 procedures and las for long time
- If the stenotic area collapses after the dilatation soon, the surgery is the treatment of option
- Caution must be exerted to treat 90-120 degree of lumen at one time
- If the segment is too long, involves too much cartilages or collapse soon after dilatation, open surgery must be considered

First patient

- A 36 yr old woman, otherwise healthy , progressive DOE, known as refractory asthma
- Stridor, fixed pattern on flow-volume loop
- No surgery, intubation, icu admission
- No FH or PH of autoimmune disease
- Her mother had idiopathic cervical tracheal stenosis, relieved by once rigid dilatation

Other findings

- No autoimmune feature
- Two simple web like stricture, without inflammation and tracheomalacia
- She is not in respiratory distress

Referal to Dr Aliali

- Is she a good candidate for balloon dilatation?
- how do you choose the appropriate size for balloon dilatation?
- What is your technique, follow up, interval in procedure?

2nd patient

- 22 yrs old female presented with respiratory distress and pneumothorax, intubated in ED, the intubation was difficult with 6.5 f endotracheal tube, H1NI positive, she has been admitted and intubated 2 months a ago because of suicide
- After 5 days , she was extubated, several hours after extubation, stridor and respiratory distress recurred and again she was intubated. The following day , she underwent bed side bronchoscopy showed > 50 % obstruction in subglottis and proximal part of cervical trachea with malacia

Consult with Dr Kazemizadeh

- What is your recommendation?
- Tracheostomy? Rigid dilatation?
- Follow up?
- Do you refer the patient for open surgery?

The 3rd patient

- A 63 yrs old man, know case of copd and opium addiction, intubated for copd exacerbation and opium overdose, he was intubated for 7 days after discharge the dyspnea is progressive, there is inspiratory stridor
- On bronchoscopy there is 2 cm stenotic area in proximal part of trachea, with obvious tracheal deformity, malacia, balloon dilatation was done with immediate chollapse after dilatation

He was referred to Dr Eslamian

Is he a suitable candidate for resection, anastomosis

Indications?

Eligibility criteria?

4th patient

- A 16 yrs old boy with stridor and significant dyspnea
- History of Multiple trauma,ICU admission and intubation and then tracheostomy for 6 weeks
- On bronchoscopy , there was 50% tracheal lumen obstruction, 2 cm above carina,3 cm stricture in from of deformity, fibrotic and tissue scar,immediate collapse after rigid dilatation

He was refred to Dr Kiani

- Stent insertion indication in benign tracheal stenosis
- Which kind of stent
- Care of stent and patient follow up