

A child with dyspnea

Departments of Pediatric Intensive Care, Anesthesia,
Surgery, Radiology and Oncology
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Patient history...

- 12 year old previously normal boy
- c/o cough and wheeze x 3 days

- Admitted outside and treated as acute asthma with bronchodilators and steroids



Patient history...

- Came to KKCTH on.....

- At presentation:
- Wheeze
- Dyspnea
- Orthopnea
- Hemodynamically stable
- Normal sensorium

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- Right testis enlarged
 - (Orchidopexy for undescended testis done at 3 years)



Investigations

- CBC (TC 7400 N 56 L 40 E 04, Hb 11.2, Platelets 2 lakh)
- Chest X ray

Differential diagnosis OF X ray chest finding

- Mediastinal mass
 - Lymphoma
 - Germinoma
 - Teratoma

Now what??

- CT thorax + tissue biopsy
- But how???
- Very orthopneic
- Could not lie supine for even 1 minute



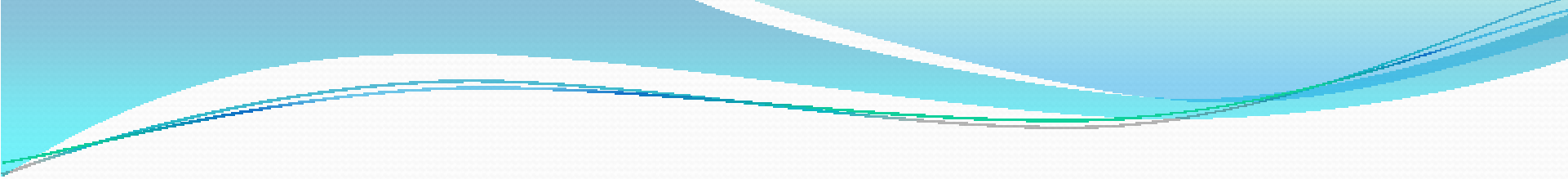
Initial management

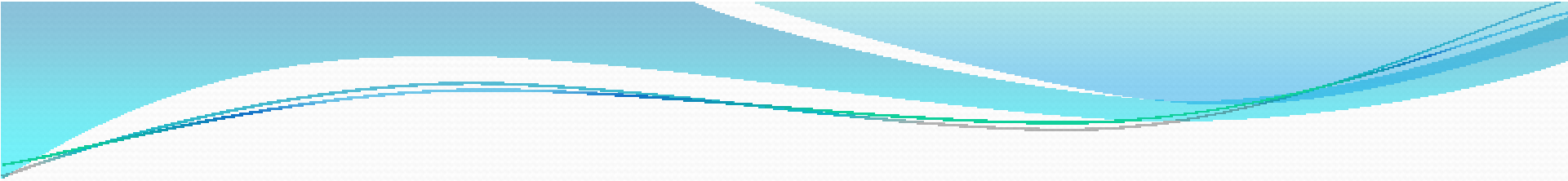
- Dexamethasone (1 dose)
- Admitted to ICU
- O2 by face mask

- Scheduled CT thorax with CT guided tissue biopsy next morning under inhalational anesthesia

CT Thorax

- Performed under sevofluorane by face mask
- Had airway collapse at the end of the procedure

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- Intubated in CT scan room
 - Bagging difficult

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- Lateral position
 - Bagging/sevoflurane continued
 - Chest rise poor
 - Maintaining SpO₂

Diagnostic procedures in CT Room

1. Bone marrow
2. USG guided pericardial
tap
3. USG guided Trucut biopsy

In the mean time...

Superior vena caval obstruction

- Congested edematous face
- Petechiae
- Subconjunctival hemorrhages
- Prominent neck and forehead veins



To ventilate or extubate??

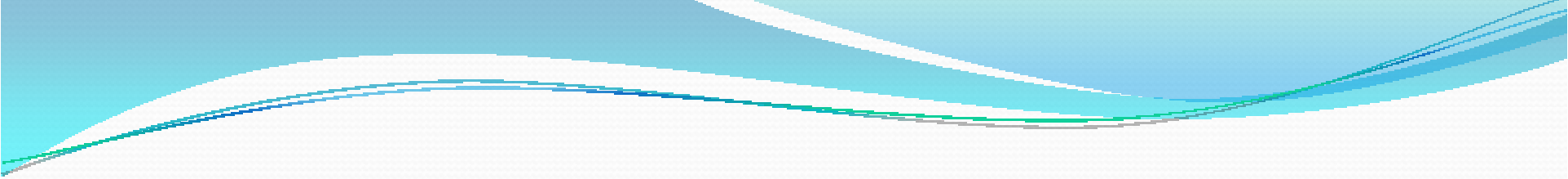
- Hemodynamically stable
- Sevoflurane stopped
- Child still drowsy
- Shifted back to ICU



Back in the PICU

- No hypoxia
- No dyselectrolytemia
- No hypotension

- ETCO₂ connected... 99 !!!

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- Patient ventilated sitting up / leaning forward
 - ETCO₂ decreased
 - Clinically air entry improved
 - Sensorium improved within minutes
 - extubated



Post extubation

- Normal sensorium
- Dexamethasone restarted
- Overnight, developed some dyspnea
- Put on Non invasive Ventilation (NIV)
- NIV weaned over 48 hours

Reports

- CT thorax
- Bone marrow normal
- Pericardial tap: few round cells
- Biopsy: high grade NHL (lymphoblastic) - Started on chemotherapy (vincristine)
- USG abdomen/scrotum normal



Difficulties encountered

- Risk to airway
- Imaging
- Difficult ventilation
- Diagnostic procedures
- Steroids



Take home messages

- All wheezers are not asthmatic
- Anticipate difficult airway and difficult ventilation in mediastinal lesions
- Avoid steroids before diagnosis
- Think of hypercarbia



Thank you