

# Case of Stridor

- 46 / female
- Presented with shortness of breath for 20 days  
wheeze for 20 days  
hoarseness of voice for 4 months  
swelling in front of neck for 6 years

K/C/O hypothyroidism since 2013

- No h/o loss of appetite , loss of weight, cough, fever,hemoptysis

# Examination

- General examination - Unremarkable, except for a soft tissue swelling in front of neck, 5 \*4 cm in size , mobile, soft, fluctuant
- Swan neck deformity
- Respiratory system examination-
  - Wheeze present
  - Stridor present
  - Rhonchi present

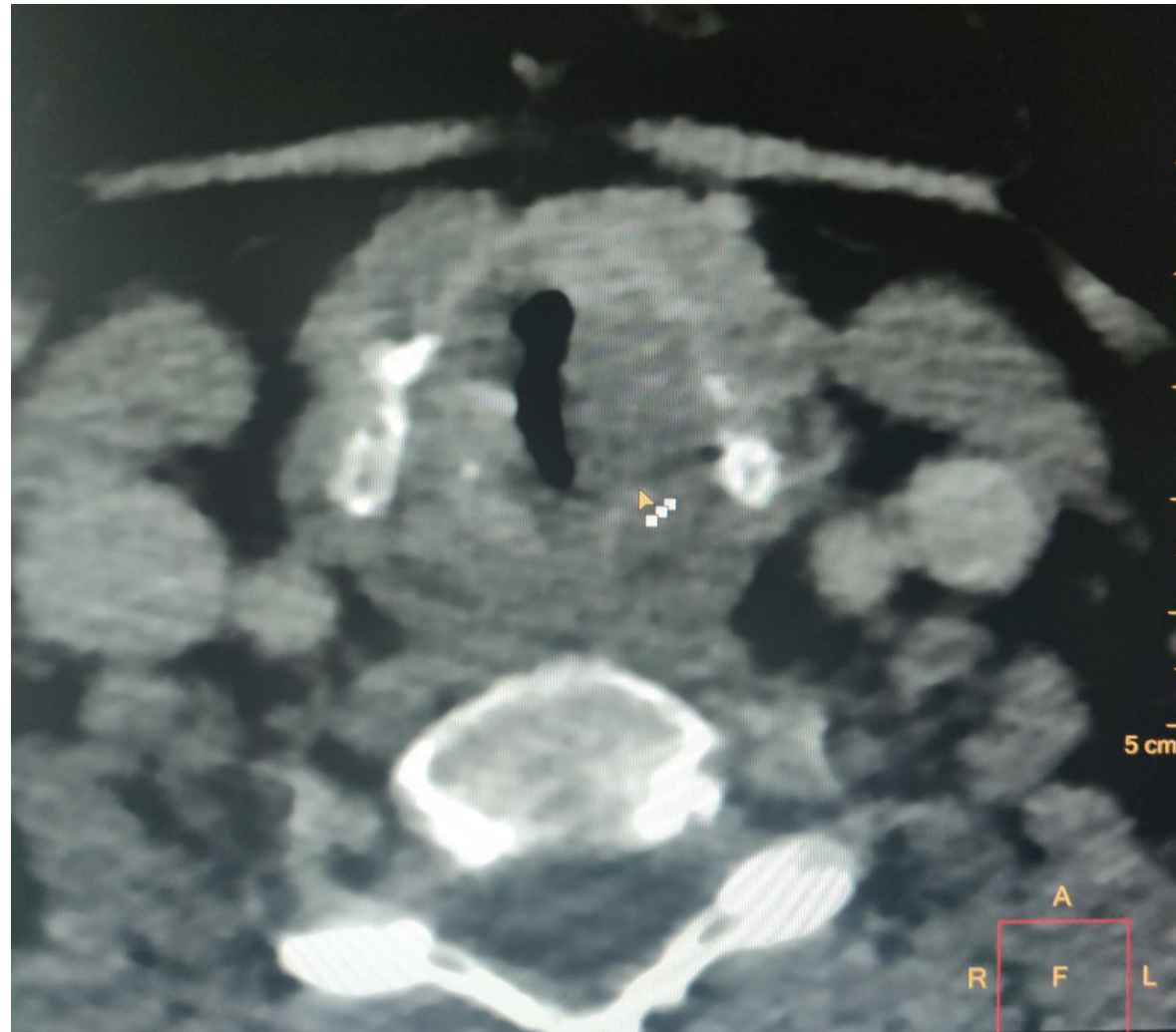
# Investigations

TC - 11000 Hb- 12.5 Plt - 284	Chest X-ray - Normal
Urea - 25 S. Creatinine - 0.8	S. Electrolytes - Normal
LFT - Normal	TSH 5.1

## *Differential diagnosis*

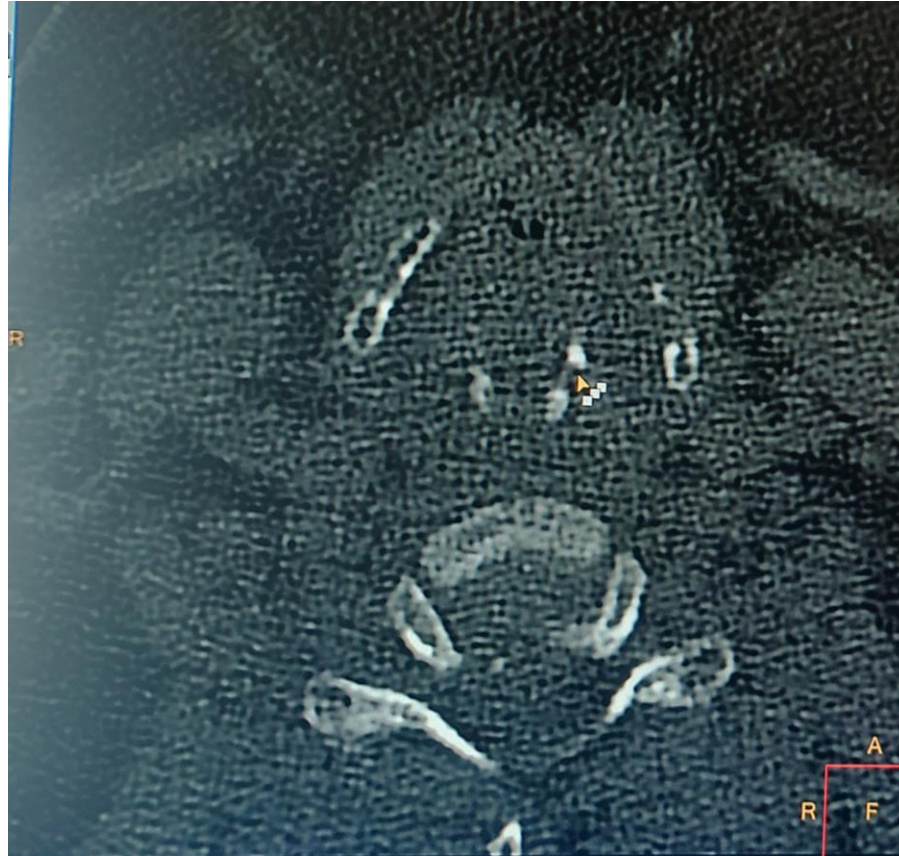
- CA Larynx
- Tuberculosis
- Thyroid mass compressing trachea

## CT Neck



Left vocal cord is bulky

# CT Neck

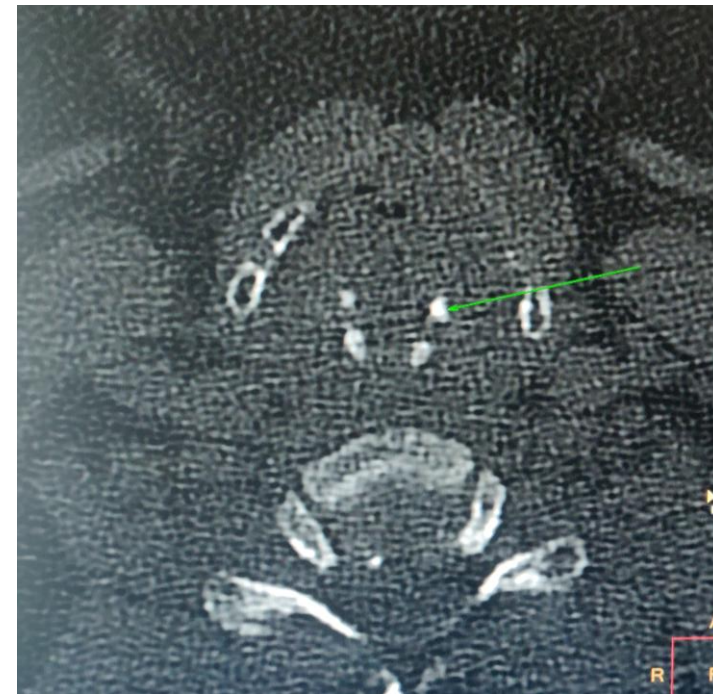
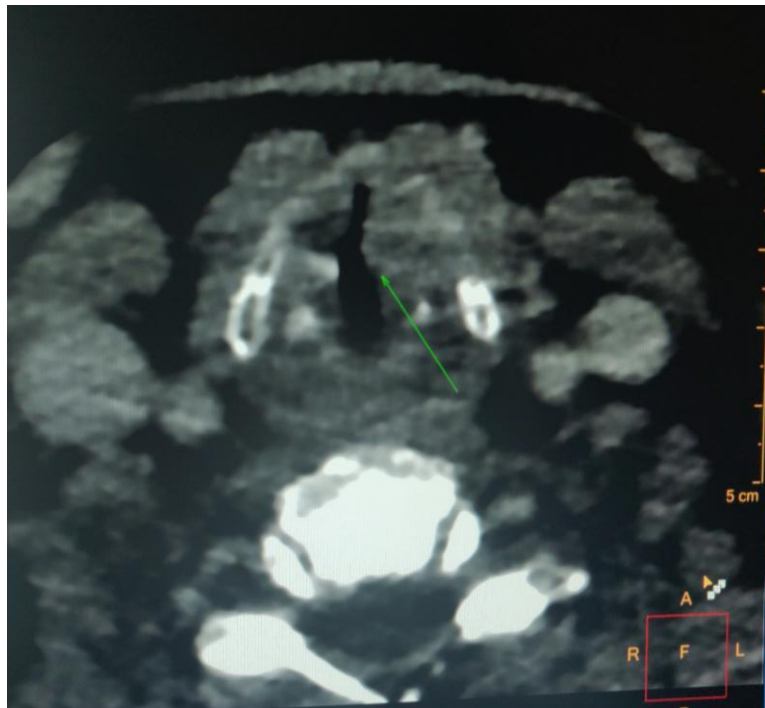


Sclerosed ary epiglottic fold

# CT Neck

right vocal cord is abducted on phonation  
and left vocal cord is in paramedian position

Sclerosed aryepiglottic fold





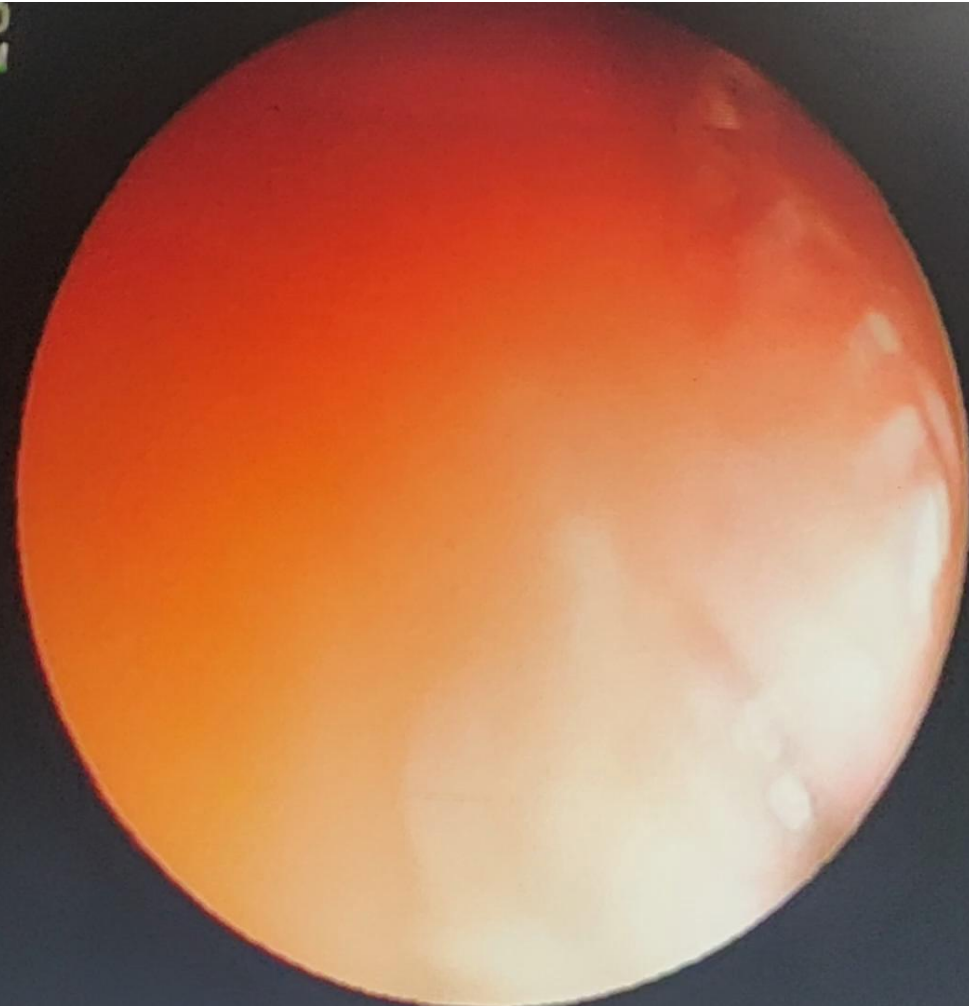
# Bronchoscopy done



15.01.2020  
09:27:13AM

AT 1:60  
0  
HNS

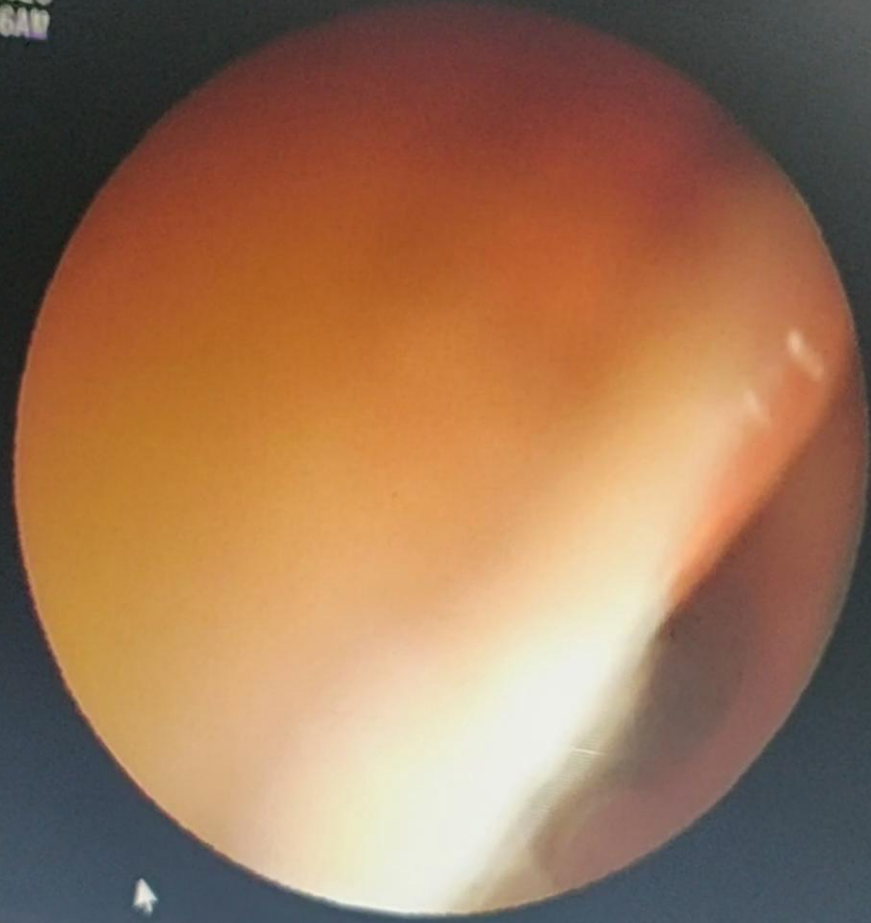
RUBY HALL



15.01.2020  
09:28:26AM

AT 1/60  
0  
HRS

RUBY HALL

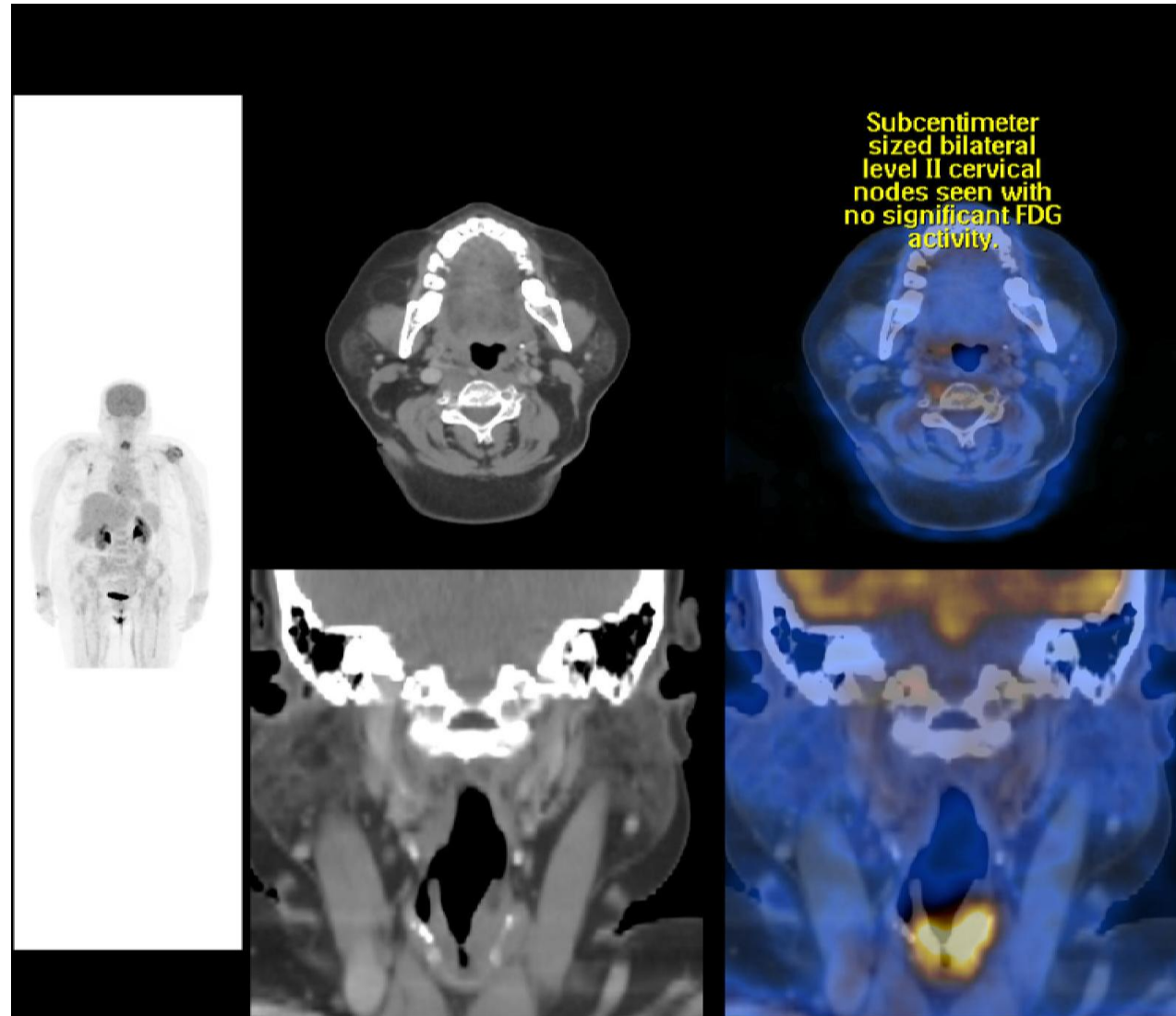


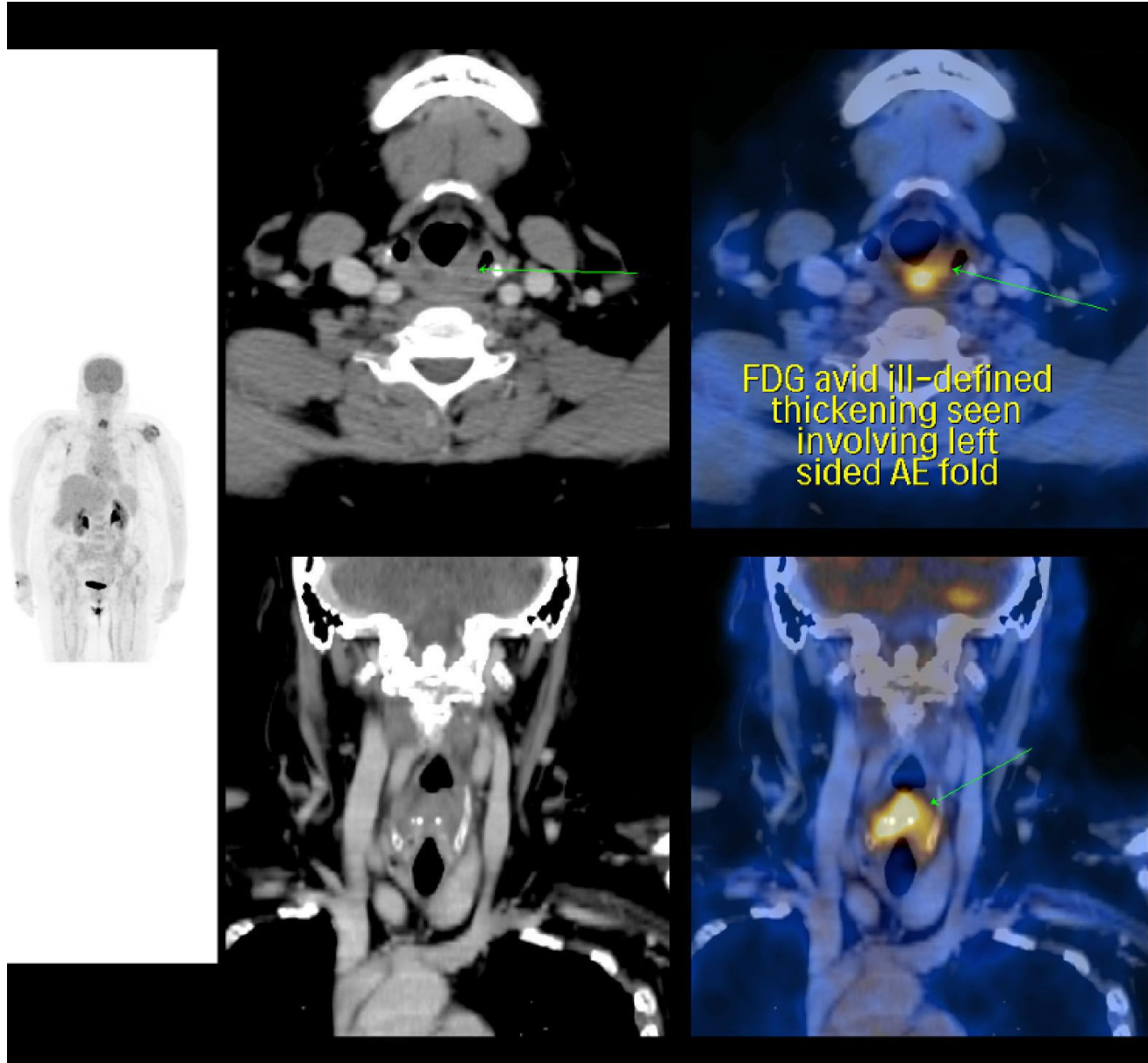
# Bronchoscopic findings

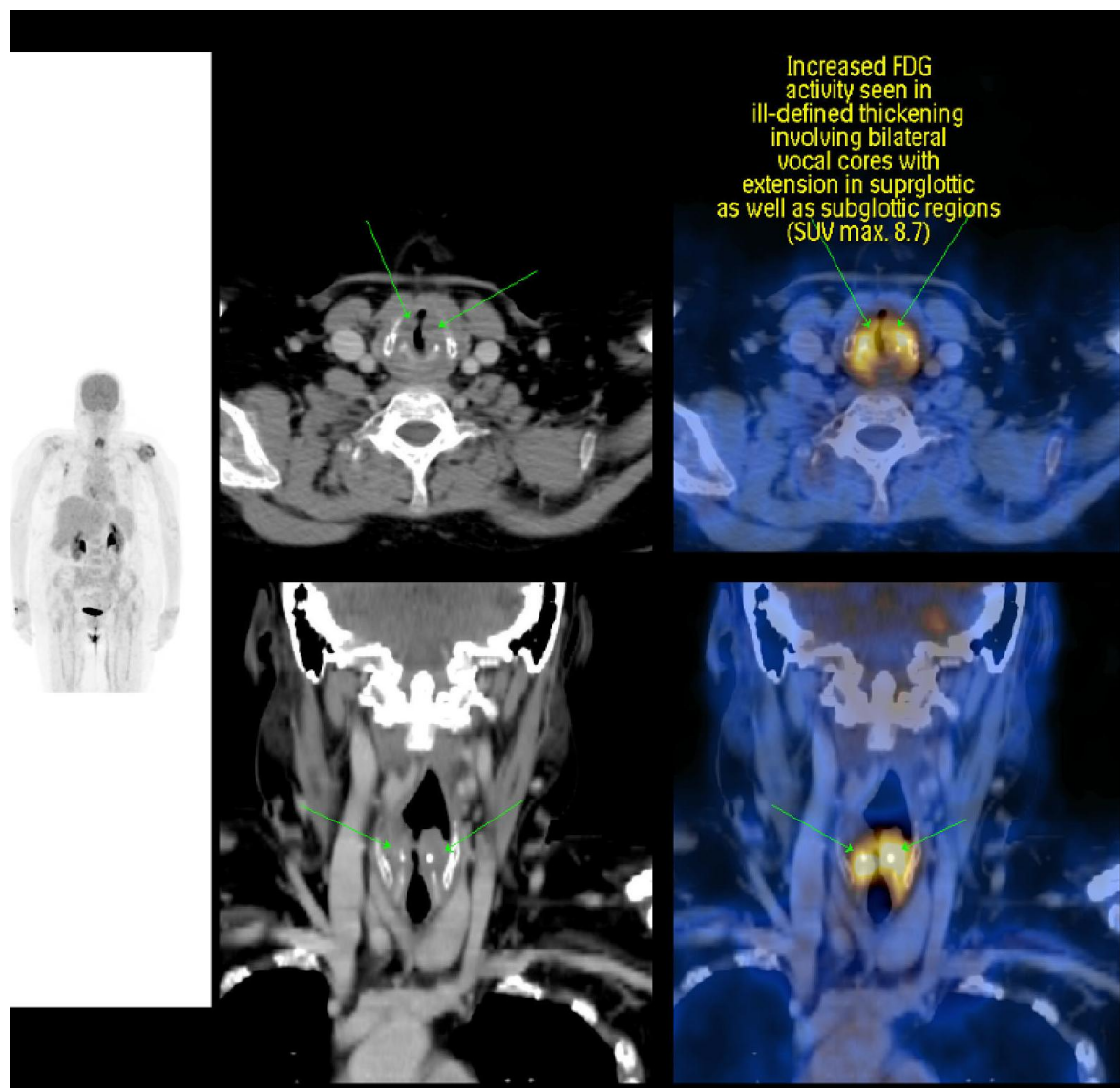
- *Left vocal cord was completely paralysed*
- *White nodule on left vocal cord*
- *There is narrowing in immediate subglottic area with whitish slough visible, ulcerated lesion*
- Tracheo bronchial tree is normal
- Biopsy has been taken from growth

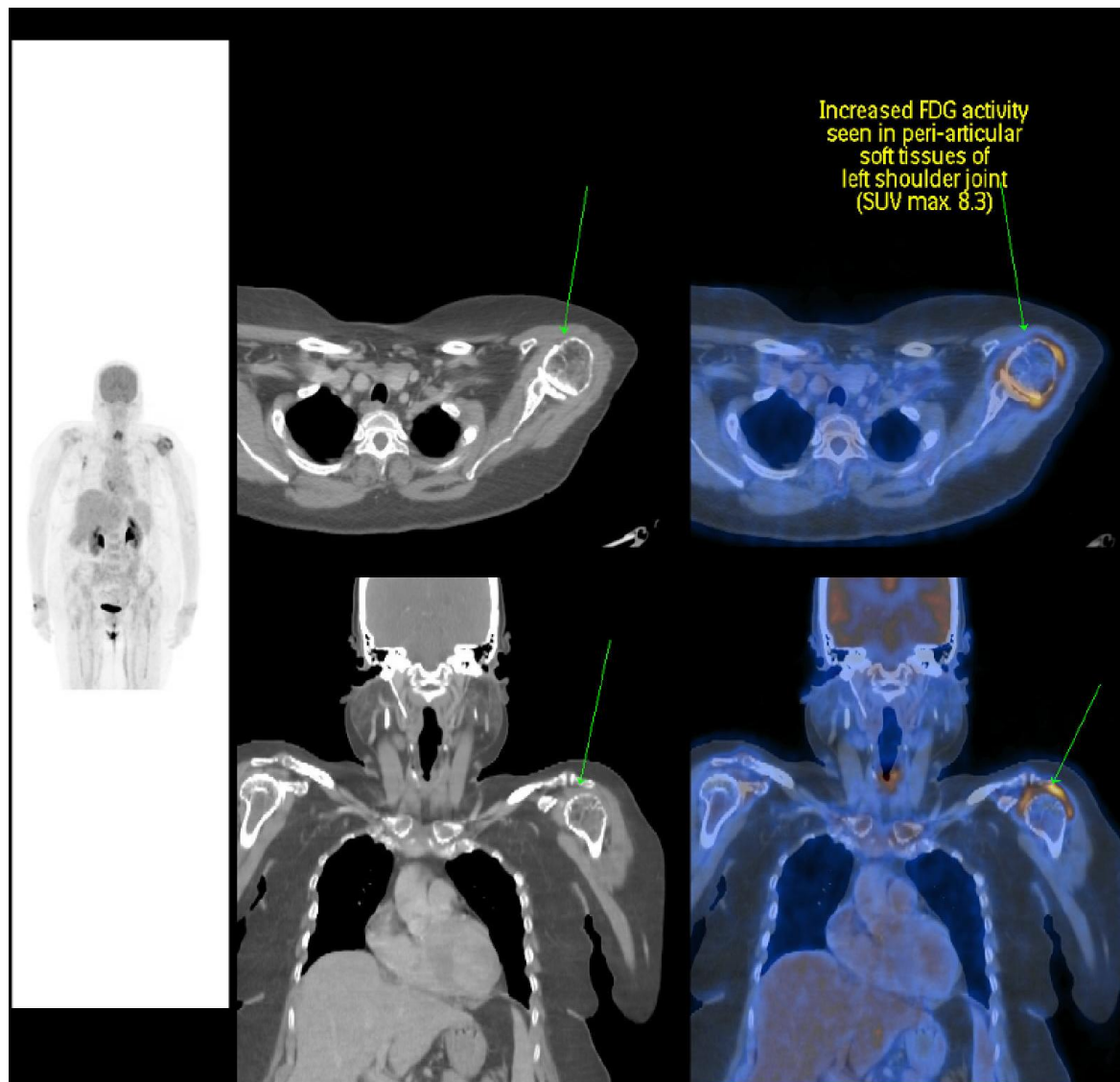


# PET CT











# Oncology Consultation

- Oncologist was involved
- Plan for total laryngectomy and permanent tracheostomy after histopathology report

# HPE report

- Acute on chronic inflammation not otherwise specified
- No granuloma
- No malignancy
- ZN and PAS stain - Negative

Then patient had one non healing ulcer in right toe.

Surgery reference has been done and wound debridement done.

On detailed history , patient given history of joint pains

On hospital admission also ,patient had shoulder and back pain responding to analgesics

Since biopsy came to be inconclusive for malignancy, repeat biopsy with direct laryngoscopy was planned

**ENT reference given for direct laryngoscopy and biopsy**

Biopsy report - Acute on chronic inflammation not otherwise specified

## Rheumatology consultation

ANA - Negative

Anti - CCP > 200

RA Factor - 90

TB PCR - negative

Unanimous conclusion was drawn, about the ulcer being of Rheumatoid aetiology.

# Treatment

- Patient responded to steroids
- There is improvement in voice
- Patient was put on oral steroids for maintenance
- Check bronchoscopy to visualise vocal cord done - ulcer in subglottic area persists



# Rheumatoid arthritis-associated lung disease

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@ERSpublications

Comprehensive, up-to-date review of RA-associated lung diseases including pathogenesis and management <http://ow.ly/FBaNZ>

TABLE 1 Pulmonary manifestations of rheumatoid arthritis

**Parenchymal**

Interstitial lung disease (*i.e.* usual interstitial pneumonia, nonspecific interstitial pneumonia, acute interstitial pneumonia/diffuse alveolar damage and organising pneumonia)

**Pleural disease**

Pleural effusion

Pneumothorax

Bronchopleural fistula

Trapped lung syndrome

**Airway obstruction**

Cricoarytenoid arthritis

Bronchiectasis

Follicular bronchiolitis

Obliterative (constrictive) bronchiolitis

**Nodules**

Rheumatoid nodules

Caplan syndrome

**Vascular disease**

Rheumatoid vasculitis

Pulmonary hypertension

**Other**

Drug toxicity

Infection

Malignancy

Thoracic cage restriction

Thromboembolic disease



### *Upper airway involvement*

Upper airway disease occurs more frequently in females and those with longstanding or severe disease [56, 57]. Manifestations include rheumatoid nodules on the vocal cords, vasculitis affecting the recurrent laryngeal or vagus nerves leading to vocal cord paralysis, or arthritis of the cricoarytenoid joint. In the latter condition, synovial thickening and build-up of excess synovial fluid leads to progressive cartilage erosion and subluxation of the joint. These findings are best seen on HRCT scans of the neck and are often present before clinical symptoms develop [58, 59]. Patients may have symptoms of dysphagia, throat pain or fullness, or exertional dyspnoea, but many are asymptomatic until significant obstruction occurs [60]. Acute stridor or obstructive respiratory failure may occur from sudden subluxation or superimposed airway oedema from infection or intubation. Mild symptoms may be managed with nonsteroidal anti-inflammatory drugs or rheumatoid arthritis-directed therapy. For more severe obstruction, surgical intervention may be required in addition to immediate airway management [56, 60].

## Pulmonary Manifestations of Rheumatoid Arthritis

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Upper airway obstruction can occur in RA because of cricoarytenoid arthritis; less common causes include vasculitis involving the recurrent laryngeal or vagus nerves, which can then cause obstruction due to vocal cord paralysis. Upper airway disease is more common in women and in longstanding RA. Unfortunately, symptoms of upper airway obstruction can often be absent until significant airway

## *Review Article*

# **Laryngeal Manifestations of Rheumatoid Arthritis**

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*2.1. Epidemiology.* Laryngeal involvement in patients with RA is invariably underdiagnosed early in the course of the disease in view of the subtle clinical findings. A high index of suspicion is often needed to recognize laryngeal involvement especially in the presence of confounding factors such as laryngopharyngeal reflux disease and allergy. The prevalence of the laryngeal manifestations of RA has been on the rise. In a report by Lawry et al. in 1960, the prevalence of laryngeal symptoms was up to 31% [7]. Towards the end of the century, the prevalence increased to seventy-five percent. This increase can be attributed either to the enhanced awareness regarding the laryngeal involvement with RA or to the improved yield in the diagnosis. It is important to note that the clinical prevalence falls below the postmortem histopathological diagnosis of laryngeal involvement which is estimated to be up to 90% of the cases. When present, the laryngeal manifestations span an array of findings ranging from cricoarytenoid joint fixation and neuropathy of the recurrent laryngeal nerve, to myositis and presence of laryngeal nodules [8–17].