

## Vocal Cord Paralysis Induced Aspiration Pneumonia with Ards: An Unusual Presentation Seen in a Case of Intracranial Space Occupying Lesion

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### Abstract

Intra cranial space occupying lesion have been known to present with varied symptoms and signs, mostly related to CNS since the involvement of brain parenchyma directly or the pressure effects of the intracranial space occupying lesion lead to varied manifestations ranging in severity from a mild headache to coma and varied neurological deficits.

We take the opportunity to present a case report of this 63 year old male patient who was admitted with a primary diagnosis of pneumonia with ARDS, further investigation revealed a unilateral vocal cord paralysis secondary to anintra cranial space occupying lesion, although the patient was asymptomatic for any neurological symptoms previously and the prime presentation was with cough and fever of five days duration.

The unusual thing about this case was the masking effects of ARDS and shock which lead to ambiguity of diagnosis in view of no underlying medical ailment.

**Keyword:** Vocal Cord Paralysis; Intracranial Space Occupying Lesion; Aspiration Pneumonia.

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### Case History

A 63 year old male patient previously normotensive, non diabetic no h/o cardiac disease, not on any medication, presented to the emergency medicine department with fever, cough, breathing difficulty since five days.

#### Vitals

BP: Not recordable

Pulse: Feeble, 126/min

Spo2: 85% on room air

Temp.: 102 F

RBS: 105 mg/dl

ECG: Sinus tachycardia

The systemic examination/Secondary survey was unequivocal except for bilateral crepitations scattered over the chest.

The patient was started on IV vasopressors in view of non response to initial fluid resuscitation with IV fluid bolus.

The patient's initial chest x-ray revealed B/L opacities in lower and mid zones suggestive of ARDS/? Aspiration pneumonia.

*Investigations:* ABG- pH: 7.3, pCO<sub>2</sub>: 41.3, pO<sub>2</sub>: 54, HCO<sub>3</sub>: 21.9, Hb: 11.7, Na: 133,

K: 3.4, LAC: 3.8

UREA: 18.0, S.CREATININE: 0.66

CBC- Hb: 12.1, WBC: 13000, PLATELETS: 150

In spite of aggressive resuscitative measures with iv fluids, vasopressors and appropriate antibiotic therapy, along with other supportive measures the patient's clinical status showed no improvement and the patient continued to be hypotensive with severe respiratory distress and tachypnea.

After consultation with the pulmonologist, the patient was planned for endotracheal intubation in view of severe respiratory distress and inability to maintain oxygen saturation beyond 89% .

While undergoing endotracheal intubation, on direct laryngoscopy the patient's laryngeal inlet was found compromised, which led to the suspicion of

laryngeal paralysis as a cause of aspiration pneumonia, since no other possible aetiology could be attributed to the pathogenesis of aspiration pneumonia in this patient with no co-morbid conditions.

Further inquest into the cause of suspected laryngeal paralysis, leads to the diagnosis of low density lesion at base of skull on left side with epicentre at petrous apex, left cord palsy with enlargement of ipsilateral laryngeal ventricle, on CT scan.

MRI Brain: Extra axial lobulated intra cranial space occupying lesion in the region of left side of skull, base of left middle crania fossa with left half of cavernous sinus, left apex, left meckel's cave.

Immediate neurosurgical review was done and patient was planned for decompression surgery in view of ICSOL, but in spite of best resuscitative efforts the patient's clinical status kept on deteriorating with ARDS and resistant shock.

The patient went into cardiopulmonary arrest and was declared dead after failure of resuscitation as per ACLS protocols.

### Discussion

Respiratory insufficiency is a common presentation in the ED, and possible search into the causes of respiratory insufficiency in a patient with apparent pulmonary infection or X-ray suggestive of pneumonia with ARDS like picture would rarely ring the bells to look for a cause in CNS.

But again considering the scenario in this patient with no co-morbid conditions and clinical picture of a respiratory tract infection a logical way to proceed would be H1N1 screen rather than a CT brain.

The key to patient management in the emergency department is early aggressive resuscitation, but the clinician needs to be aware of subtle clinical signs, like in our case the suspicion of vocal cord paralysis on direct laryngoscopy, which can lead to formulating a conclusive diagnosis and improved patient outcomes.

### Conclusion

What we intend to convey by means of this case is that no doubt most of the times, disease presents in the prime place with symptoms suggestive of the primary organ system involvement, but as we all have learnt from previous experience as clinicians we should not miss any minor details in the patients presentation since as the dictum goes, *biology is a science of exceptions*, any disease can present with atypical or exceptional manifestations.

Early recognition of important clinical signs can be vital in directing our diagnostics and management in critically ill patients, helping improve survival and prognosis.

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