TACTFULLY AVOIDING THE MECHANICAL VENTILATION IN CRITICALLY ILL YOUNG PATIENT

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A 30 year old primigravida was admitted in Allied hospital Faisalabad where her C-section was performed due to oligohydramnios. She was referred to the critical care physician for ICU care when she developed sudden severe shortness of breath while she was lying in hospital bed, 24 hrs after C- section. No history of orthopnea, or any breathing problem in her past. No associated cough and sputum but low grade fever since evening. The patient was doubtful about any blood transfusion in the theater. On arrival in the ICU, she was conscious but anxious with HR 125/min, BP 125/85 mmHg, temp 100°F, RR 40/min, SpO2 97 %, ABG PaO2 85 mmHg on 8L/min 02. PaCO2 27 mmHg. Ph 7.45. Bilateral mild pitting edema. No added heart and chest sounds and crackles were difficult to appreciate due to thick chest wall. JVP not raised. CXR showed left pleural effusion. ECG sinus tachycardia. TLC 18,600 /ul, CRP 138 (N=10). Serum electrolytes, RFTs, LFTs, Urine C/E, Bedside Echo all normal but commented left pleural effusion. CTPA and leg vein doppler was planned by the next day. Heparin IV infusion started on arrival (with close monitoring of APTT and any PV bleeding). Pt is young and not expressing much subjective discomfort but sweating significantly. RR was still between 35 to 40/ min after 14 hrs. Now Sp02 95%, PaO2 95 mmHg with 2L/ min 02 PaCO2 30. Ph 7.44.

We had following queries.

1. Any need for invasive or non invasive ventilation. As RR is >35/min for last 14 hrs.
2. If we give anxiolytics (low dose alprazolam / midazolam to calm the patient or to normalize her breathing rate) can it be deleterious? Thinking that she might be anxious on top of her medical illness.
3. Should we continue heparin.

We consulted a panel of critical care experts. Following were the suggestions:
Diurese her,NIV,CTPA,BNP. Use morphine.

An early CTPA.

If effusion is moderate to severe, do therapeutic tap. Apply (Non invasive ventilation), if intolerant or if requiring high NIV settings, after few hours observation, better intubate. Rule out ARDSs. Send serum troponin as well.

Article Citation: Farooq A. Tactfully avoiding the mechanical ventilation in critically ill young patient. Indep Rev Jul-Dec 2018;20(7-12): 117-118.

Date received: 27/11/2018
Date Accepted: 27/11/2018
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Common things occur commonly. Post c-section lady with respiratory distress and tachycardia, PE would be at top of differentials, urgent CTPA is warranted.

I think intubate ventilate to prevent late night tiring out of patient.

I think a bit of diuresis guided by IVC diameter or pulse pressure variation.In my opinion CTPA would be normal.

C-section done under spinal usually involves a lot of fluids and oxytocin drugs by residents can cause fluid overload.

A-a gradient can guide about diffusion or shunt defect.

NIV is sometimes challenging in such type of Pakistani patients.
The most frequent suggestion was to put her on ventilator and getting her CTPA. We tried to avoid mechanical ventilation due to its complications like ventilator associated pneumonia (VAP), ventilator associated lung injury (VALI), barotrauma (pneumothorax) etc. We worried how to avoid mechanical ventilation. But giving her alprazolam 0.25 mg half BD worked to some extent plus there might be some effect of heparin infusion. After about 36 hrs of her stay her RR decreased from 45 to 30. And after 48 hrs she was quiet stable. I continuously infused her Normal Saline @ 100 ml/hr.

CTPA was not available the next day. She was discharged home with advice of CTPA and moxifloxacin. Still unsure of the diagnosis?

Learning points:
In seriously ill patient, the timely and empirical treatment is much more important than the actual diagnosis. So treat the patient covering up the most probable diagnoses.

The non invasive mechanical ventilation is preferred over the invasive and that too can best be avoided by escalating your professional vigilance and efficient team work.

The overlying anxiety is most often complicating the underlying disease, so also treat it efficiently.