

Severe preeclampsia complicated by acute pulmonary oedema: Case report

Deepika Gulati^{1*}, Soumyaa Agrawal², Sudha Rani G³, Sriram Gopal⁴

^{1,2}Junior Resident, ³Professor, ⁴Professor And H O D, Department of Obstetrics and Gynaecology, D Y Patil Hospital, Navi Mumbai, INDIA.
Email: dr.deepikagulati000@gmail.com

Abstract

Background: Hypertensive disorder in pregnancy is one of the supreme causes of maternal mortality according to World Health Organization. Preeclampsia is a multiorgan disease characterized by new onset development of hypertension and proteinuria after 20 weeks. Acute pulmonary oedema in pregnancy is a rare complication but a life-threatening condition. Our case report focuses on importance of identifying the risk factors, early diagnosis of the complication and active management. A 36-year-old, G2P1L1 35 weeks of gestation, a known case of preeclampsia on anti-hypertensive drugs presented with dyspnoea, desaturation and BP of 190/110 mm hg. Chest x-ray s/o pulmonary oedema. BP stabilisation done along with management of pulmonary oedema with anti-hypertensives, diuretics and non-invasive ventilation. LSCS performed and patient shifted to ICU. Post op period uneventful.

Keywords: preeclampsia, pulmonary oedema.

*Address for Correspondence:

Dr Deepika Gulati, Department of Obstetrics and Gynaecology, D Y Patil Hospital, Navi Mumbai, Maharashtra, INDIA.

Email: dr.deepikagulati000@gmail.com

Received Date: 05/09/2021 Revised Date: 13/10/2021 Accepted Date: 23/11/2021

This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/). 

Access this article online

Quick Response Code:	Website: www.medpulse.in
	DOI: https://doi.org/10.26611/10122113

gestation with Severe preeclampsia complicated by acute pulmonary oedema.

CASE REPORT

A 36-year-old G2P1L1 previous FTVD 35 weeks gestation referred from outside hospital with complained of acute onset of breathlessness. She was recently diagnosed with Preeclampsia on tablet labetalol 100 mg TDS. On arrival in casualty, she was conscious and oriented with blood pressure of 190 /110 mm Hg. No complaints of premonitory symptoms, chest pain, fever, cough. No history of h/o bronchial asthma, tuberculosis, ischemic heart disease, URTI, inhalation/ingestion of toxic substance. On examination she had pulse of 108/min with 88% saturation at room air and RR of 24/minute with abdominal and pedal edema. On auscultation Bilateral basal Crepitations heard. S1 S2 normal. No murmurs. On per abdomen examination IUGR noted. Uterus was 30 weeks, relaxed with FHR 142/minute and on per vaginum closed cervix noted On USG OBS examination the baby had FGR type 2 with EFW of 1.7 kgs and doppler suggestive of utero-placental insufficiency. USG abdomen showed normal liver echotexture. Chest x-ray revealed pulmonary edema in bilateral lower zone with moderate pleural effusion. ECG showed Sinus tachycardia. 2 D echo was normal. No valvopathy. Ejection Fraction was more

INTRODUCTION

Preeclampsia is a multiorgan disease characterized by new onset development of hypertension and proteinuria after 20 weeks. It is characterized by increased systemic vasoconstriction and peripheral vascular resistance with defects in capillary permeability. Acute pulmonary oedema in pregnancy is a rare complication but life-threatening condition. Aetiology includes decreased colloid osmotic pressure, increased hydrostatic pressure and increased capillary permeability which results in extravasation of fluid from the vasculature. Timely diagnosis and management of pulmonary oedema is important to prevent maternal and foetal morbidities and mortality. We report a case of 36 yr. old G2P1L1 35 weeks

than 60%. Covid Rapid Antigen test was negative. Liver enzymes SGOT and SGPT were raised up to 180u/L and 220u/L with normal bilirubin. Urine routine revealed proteinuria +3. RFT and coagulation profile were normal.

DIAGNOSIS: ACUTE PULMONARY OEDEMA SECONDARY TO SEVERE PREECLAMPSIA.

MANAGEMENT: Tab nifedipine 10 mg given orally to the patient and Oxygen started at 8 lit/min via NRB mask. Injection Furosemide given intra venously with antibiotics. Decision was taken to deliver the baby by caesarean section in view of Severe Preeclampsia and IUGR with unfavorable cervix. Injection MgSO4 was given according to Zuspan regimen. Intra operatively mild ascites seen with

thin meconium stained liquor. A male baby weighing 1650 grams delivered and shifted to NICU. Use of Inj. oxytocin was restricted during delivery. Post operatively patient was shifted to ICU. Covid RTPCR report came negative. Care was taken to maintain Negative Balance and avoid unnecessary use of Intra venous fluids. Patient improved dramatically after 24 hours of delivery with maintenance of saturation at room air. Injection Furosemide was continued for 48 hours after delivery. Pulmonary Oedema resolved on post LSCS chest X-ray. She was maintained on Tab Nicardia 10 mg BD with incentive spirometry. Repeat SGOT and SGPT were normal. Patient got discharged on post-operative day 6 and was counselled to do regular follow up till 6 weeks.

Following figure provide intervention modalities for pregnant patient with pulmonary oedema⁴

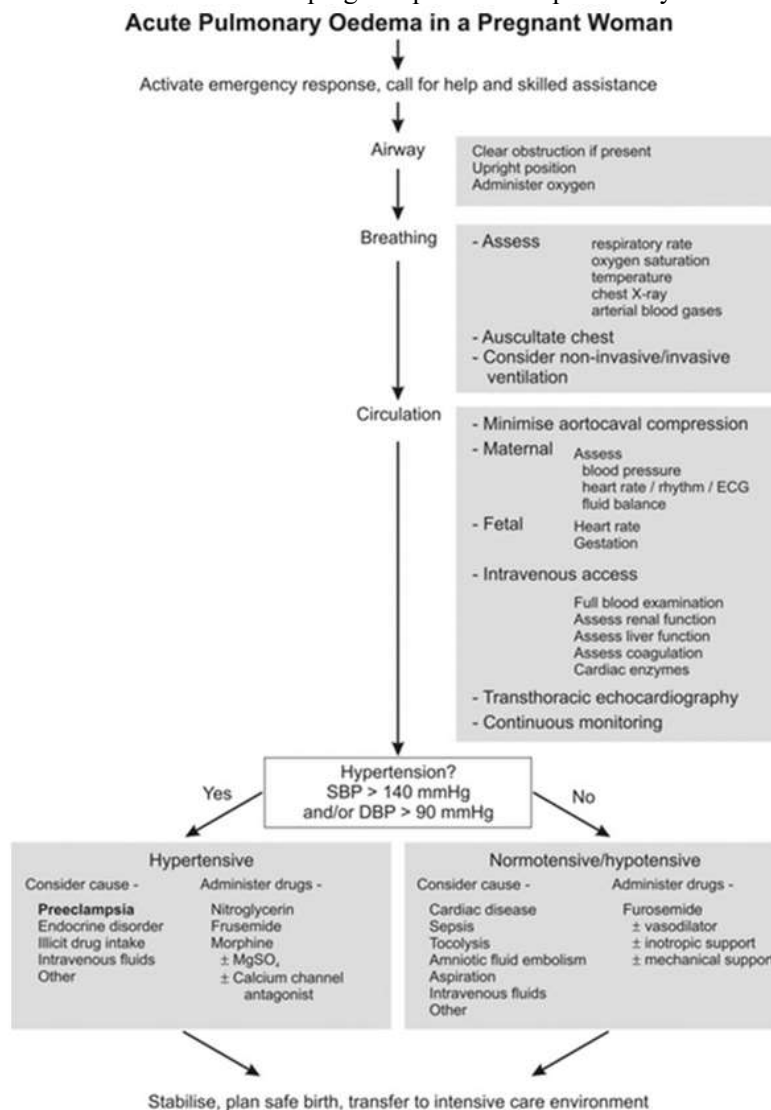


Figure 1

DISCUSSION

Criteria¹ for Severe preeclampsia includes: Blood pressure of more than and equal to 160 mm hg systolic or more than or equal to 110 mm Hg diastolic recorded on at least two occasion 4 hours apart, thrombocytopenia less than $100,00 \times 10^9/L$. Renal insufficiency (serum creatinine more than 1.1mg/dl). Pulmonary edema. New onset headache unresponsive to medication. Visual disturbances.

Acute Pulmonary edema is predisposed by an increase in capillary permeability, or an increase in intravascular hydrostatic pressure with increase in systemic vascular resistance and hypovolemia which leads to extravasation of fluid from the vasculature to alveolar spaces.² In a study done by Sibai, severe preeclamptic-eclamptic patients had pulmonary oedema for an incidence of 2.9%. Risk factors reported were increased maternal age and multi gravida.³ Other Risk factors include pre-existing cardiac disease, sepsis, multiple gestation, injudicious use of intra venous fluids, magnesium sulphate toxicity and tocolytic agents like isoxsuprine.

CONCLUSION

Acute pulmonary oedema is an emergency which require prompt treatment to prevent catastrophic effects for mother and fetus. Patient should also be explained about risk of developing cardio vascular diseases later in life and they should be monitored for the same. Transthoracic echocardiography is used in differentiating a low cardiac output from a high cardiac output condition along with other causes of acute pulmonary oedema.⁵

REFERENCES

1. Gestational hypertension and Preeclampsia ACOG Practice bulletin No. 202 Obstet Gynecol 2019;133(1):e1-e25
2. Motwani M M, Shah S S, Mehta A C. Pulmonary edema in severe pre-eclampsia (a case report). J Postgrad Med 1989;35:183
3. Sibai BM, Mabie BC, Harvey CJ, Gonzalez AR. Pulmonary edema in severe preeclampsia- eclampsia: analysis of thirty-seven consecutive cases. Am J Obstet Gynecol. 1987 May;156(5):1174-9.
4. Association of Anaesthetists Volume 67, issue 6, P646-659 2012
5. Devi DS, Kumar BJ. A case of severe preeclampsia presenting as acute pulmonary oedema. Int J Reprod Contracept Obstet Gynecol 2016;5:899-902.

Source of Support: None Declared
Conflict of Interest: None Declared