

Late Onset Preeclampsia: A postpartum surprise with serious consequences: A case report

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INTRODUCTION

- Preeclampsia is a hypertensive disorder of pregnancy, it impacts about 2 to 8% of all pregnancies, and is a major cause of maternal morbidity and mortality.
- Late onset preeclampsia (LOP) is a new onset of hypertension and proteinuria after 34 weeks of gestational age.
- It is difficult to predict as biomarker predictors of preeclampsia are more successful for early than late onset.
- Also, early onset preeclampsia (EOP) is associated with growth restricted infants and it is not so much with late onset preeclampsia.

CASE

- A 23-year-old woman with a history of asthma, morbid obesity, and hypoventilation syndrome presented to the emergency room with shortness of breath.
- She is 6 weeks postpartum and has been treated for ARDS, influenza A, and bacterial pneumonia.
- In the ER, the patient's blood pressure was high, and she had CXR showed pulmonary edema.
- She was initially admitted for hypertensive emergency, started on nitroglycerin drip and was admitted to ICU.
- Upon further questioning her mother revealed that the patient had high BP during her pregnancy and was given dexamethasone for fetal lung maturation.
- She was treated with MgSO₄. Her condition improved, she was tapered off of the nitroglycerin and transitioned to labetalol.
- She was also taken off of oxygen. She was discharged home to follow up with her obstetrician.

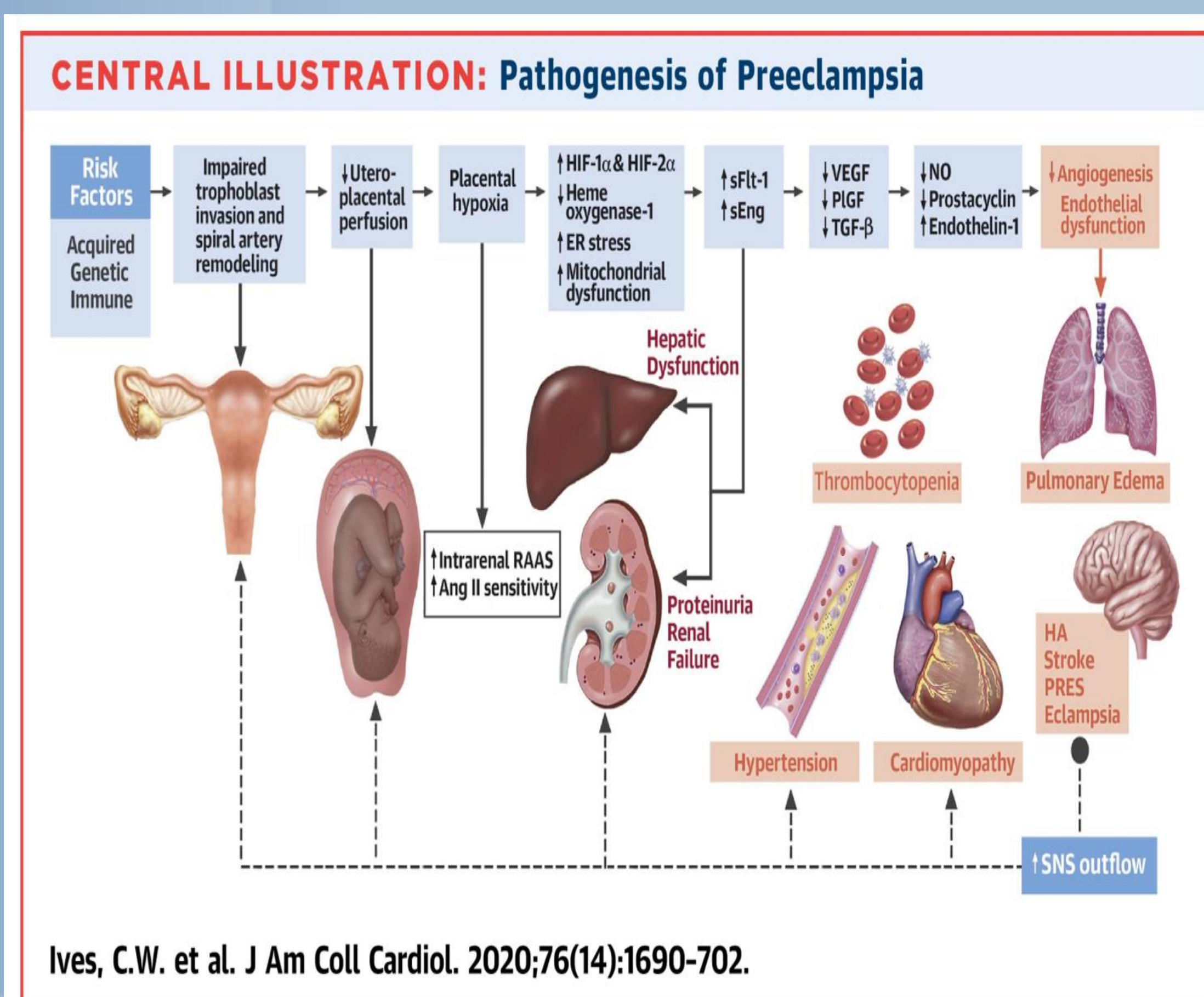
DISCUSSION

- The cause of LOP is 'intrinsic' to the growing and ageing placenta, restricting intervillous perfusion.
- This case highlights the importance of asking about pregnancy and preeclampsia in all women of child-bearing age, especially in women with pre-existing medical conditions or complex medical histories, as symptoms may be attributed to their pre-existing conditions, further complicating the diagnosis.
- According to one study, maternal mortality is high in LOP compared to EOP. This also highlights the importance of follow-up care for patients, as timely intervention can lead to complete recovery.

REFERENCES

1. Raymond D, Peterson E. A critical review of early-onset and late-onset preeclampsia. *Obstet Gynecol Surv.* 2011 Aug;66(8):497-506. doi: 10.1097/OGX.0b013e3182331028. PMID: 22018452.
2. Tekla H, Yemane A, Abraha HE, Berhe E, Tadesse H, Gebru F, Yahya M, Tadesse Y, Gebre D, Abrha M, Tesfay B, Tekle A, Gebremariam T, Amare B, Ebrahim MM, Zelelew YB, Mulugeta A. Clinical presentation, maternal-fetal, and neonatal outcomes of early-onset versus late onset preeclampsia-eclampsia syndrome in a teaching hospital in a low-resource setting: A retrospective cohort study. *PLoS One.* 2023 Feb 27;18(2):e0281952. doi: 10.1371/journal.pone.0281952. PMID: 36848332; PMCID: PMC9970097.
3. Hung TH, Hsieh TT, Chen SF. Risk of abnormal fetal growth in women with early- and late-onset preeclampsia. *Pregnancy Hypertens.* 2018 Apr;12:201-206. doi: 10.1016/j.preghy.2017.09.003. Epub 2017 Sep 11. PMID: 29104027.

PATHOGENESIS



Acquired, genetic, and immune risk factors contribute to early placental dysfunction (Stage 1). Placental dysfunction results in release of anti-angiogenic factors leading to later multiorgan dysfunction (Stage 2). Solid arrows represent progression of disease. Dashed arrows represent SNS effect on respective organs. Ang II: angiotensin II; ER: endoplasmic reticulum; HA: headache; HIF: hypoxia-inducible transcription factor; HO: heme oxygenase; NO: nitric oxide; PlGF: placental growth factor; PRES: posterior reversible encephalopathy syndrome; RAAS: renin-angiotensin-aldosterone system; sEng: soluble endoglin; sFlt-1: soluble fms-like tyrosine kinase; SNS: sympathetic nervous system; TGF-β: transforming growth factor; VEGF: vascular endothelial growth factor.