Pathways to and from Preeclampsia: A Working Perspective beyond the Common List of Blood and Urine Markers

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Background: Simply stated, preeclampsia is new-onset hypertension with proteinuria during gestation. However, preeclampsia is complex, virtually affects every organ and is often confused with other entities.

Methods: My aim is to provide clinicians with a working framework. Such framework is key in identifying underlying disease processes that mimic or predispose patients toward developing hypertensive disorders and evolving manifestations (e.g., renal failure).

Results: Select data are reviewed to tie in insights with numerous portals and pathophysiologic processes that lead to pre-eclampsia, hypertensive disorders of pregnancy, and imitators of preeclampsia (e.g., acute fatty liver, HELLP, TTP-HUS, SLE exacerbation). The underlying processes or preexisting chronic diseases—DM, renal disease, autoimmune disease—all lead to an assortment of physiologic dysfunctions affecting uterus and kidney with or without additional organ involvement; see figure.

Conclusion: Many disease processes predispose toward preeclampsia, a heterogeneous condition unique to pregnancy. Regardless of background and ultimate pathway, over-arching principles are shared.

Figure: Underpinning Principle