Do we also need recommendations on management of hypertension rise?

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Mini commentary for

Wen T et al. Trends and Outcomes for Deliveries with Hypertensive Disorders of Pregnancy from 2000 to 2018: A Cross-Sectional Study (Manuscript ID BJOG-21-1382.R1)

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So good to read an article that is well written and reports of a well-numbered registry based study. So much information can be derived from the registries. This study was aimed to report on trends of incidence and outcome of hypertensive disorders of pregnancy (HDP); risk factors and outcome, an information-gap after the implementation of new recommendations by the American College of Obstetricians and Gynecologists (ACOG) in 2013. [ACOG task force, Obstet Gynecol 2013, 122(5):1122-1131]. The recommendations involve diagnosis, prevention, monitoring and management, aiming to improve maternal and neonatal outcome. Now would be a good time to check if they do. Unfortunately, risk factors for HDP or adverse outcome, such as obesity and chronic hypertension also seem to rise.

The authors report 5.6 million women (7.7%) with a diagnoses of HDP in 73.1 million delivery hospitalizations from 2000 to 2018. The proportion of HDP almost doubled from 603 to 1,196 per 10,000 delivery hospitalizations, representing an average annual percent change (AAPC) of 3.8% (95% CI 3.4%, 4.2%) over the study period. Severe HDP demonstrated the largest increases. In the same period, risk factors for HDP increased from 9.6% to 24.6%. This seems to account for part of the increase in incidence of HDP. The incidence of stroke decreased significantly for women with HDP, but only after 2013, suggesting an effect from the new recommendations. In contrast, incidences of acute renal failure and acute liver injury increased, comparable to the incidences in non-hypertensive pregnancies.

Writing this commentary, my thoughts go out to all the caregivers that fill in the extensive lists of items, day in, day out, after every delivery. Without their work, none of the data would exist, and without their accuracy, none of the data would be reliable. Registries are ideal for trend-analyses on a population wide scale, but let's not forget where they're limitations. Interpretations and Misclassifications occur. New recommendations may create awareness and focus on these diagnoses. Validation trials reveal good quality of hospital databases, but diagnoses and birth data are generally less accurate than for most conditions and procedures [Lain et al. Med Care, 2012, 50(4), e7-20]. Using delivery hospitalizations should rule out duplications (recurrent hospitalizations appear as distinct observations [Khera et al Circulation 2017, 10(7), e003846], but may also rule out postpartum HDP, or stroke.

Still, considering all of the above, the numbers are alarming. Where is this going? How many more HPD are we going to face in the coming period? What can we do to prevent this from escalating? What will be the effect of aspirin, which we are more and more prescribing, in a population that holds more and more risk-factors for HDP. We cannot emphasize enough on prevention. We may need new recommendations to address the rising prevalence of obesity, renal failure and liver injury (with or without HDP).

Last but not least, I find it appreciating to conclude that management modifications do have a positive effect on the incidence of stroke.