

Comparison of Incidence and Risk Factors of Early Onset and Late Onset Preeclampsia: A Population Based Cohort Study

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Abstract : Preeclampsia is a major complication of pregnancy. Prediction and management of preeclampsia is a challenge for obstetricians. To our knowledge, no major progress has been achieved in the prevention and early detection of preeclampsia. There is very little known about the clear treatment path of this disorder. Preeclampsia puts both mother and baby at risk of several short term- and long term-health problems later in life. There is huge health service cost burden in the health care system associated with preeclampsia and its complications. Preeclampsia is divided into two different types. Early onset preeclampsia develops before 34 weeks of gestation, and late onset develops at or after 34 weeks of gestation. Different genetic and environmental factors, prognosis, heritability, biochemical and clinical features are associated with early and late onset preeclampsia. Prevalence of preeclampsia greatly varies all over the world and is dependent on ethnicity of the population and geographic region. To authors best knowledge, no published data on preeclampsia exist in Qatar. In this study, we are reporting the incidence of preeclampsia in Qatar. The purpose of this study is to compare the incidence and risk factors of both early onset and late onset preeclampsia in Qatar. This retrospective longitudinal cohort study was conducted using data from the hospital record of Women's Hospital, Hamad Medical Corporation (HMC), from May 2014-May 2016. Data collection tool, which was approved by HMC, was a researcher made extraction sheet that included information such as blood pressure during admission, socio demographic characteristics, delivery mode, and new born details. A total of 1929 patients' files were identified by the hospital information management when they apply codes of preeclampsia. Out of 1929 files, 878 had significant gestational hypertension without proteinuria, 365 had preeclampsia, 364 had severe preeclampsia, and 188 had preexisting hypertension with superimposed proteinuria. In this study, 78% of the data was obtained by hospital electronic system (Cerner) and the remaining 22% was from patient's paper records. We have gone through detail data extraction from 560 files. Initial data analysis has revealed that 15.02% of pregnancies were complicated with preeclampsia from May 2014-May 2016. We have analyzed difference in the two different disease entities in the ethnicity, maternal age, severity of hypertension, mode of delivery and infant birth weight. We have identified promising differences in the risk factors of early onset and late onset preeclampsia. The data from clinical findings of preeclampsia will contribute to increased knowledge about two different disease entities, their etiology, and similarities/differences. The findings of this study can also be used in predicting health challenges, improving health care system, setting up guidelines, and providing the best care for women suffering from preeclampsia.

Keywords : preeclampsia, incidence, risk factors, maternal

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