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EDITORIAL

The real health impact of a newborn from a pregnancy with hypertensive disorder

El verdadero impacto en la salud del neonato nacido de una gestación con trastorno hipertensivo del embarazo

Hypertensive disorders of pregnancy are a common condition worldwide,[1] particularly in less advantaged countries, and are responsible for an important fraction of premature births in that the treatment in many cases includes termination of pregnancy.[2] These disorders represent a relevant problem in terms of the acute disability they cause. Hypertensive disorders of pregnancy are the fourth reason worldwide of lost years due to disability among all problems related with pregnancy. However, their impact does not end there. Prematurity, by far, is the main cause of lost years due to disability among neonatal problems and the second cause of cognitive disability worldwide.[3] Because of this, the relationship between hypertensive disorders of pregnancy and prematurity is very relevant in terms of the disease load they generate, both for the mother as well as for the children.[4]

In the article "Newborn of mother with HELLP syndrome: characteristics and role of prematurity, low weight and leukopenia in evolution" published in the present number of the *Boletín Médico del Hospital Infantil de México,* González-Álvarez et al. from the Neonatology Services of the Central University Hospital of Asturias in Oviedo (Asturias, Spain) present the perinatal outcome of 33 neonates of 28 mothers with HELLP; two were stillborn and four more died after birth.[5] In addition to illustrating in detail the clinical situation of these infants, the authors point out that the only factor associated with neonatal mortality was prematurity because they found no association with other studied factors.

The report of González-Álvarez et al. is a very interesting attempt at exploring other risk factors of mortality in the particular group of neonates born after pregnancies with HELLP syndrome. As they clearly suggest, HELLP syndrome is not necessarily part of the spectrum of the preeclampsia (PE)/eclampsia syndrome, although the majority of cases present in pregnant women who suffer from it. This phenomenon is the clinical vision of a series of disorders produced in pregnant women, not necessarily in a homogeneous sequence, and is expressed in different ways, the reason for which PE should be considered as more of a syndrome than a specific disease. In fact, the clinical spectrum of hypertensive disorders of pregnancy, including mild or severe PE, eclampsia or HELLP, can be the meeting point of different genetic or immunological conditions as well as maternal or fetal conditions (chronic arterial hypertension, autoimmune disorders or multiple pregnancies) that during the progression of pregnancy lead the maternal organism to insufficiency, which is expressed in some of these syndromatic phenotypes.[1] By analyzing this work exclusively for children of mothers with HELLP syndrome, the potential confusion that could arise when studying neonatal outcomes derived from the apparent spectrum of severity of hypertensive disorders of pregnancy is reduced.[5] However, when the outcomes of these babies born from pregnancies of mothers with HELLP syndrome are not compared with equally premature neonates with any degree of severity of PE (mild, severe or eclampsia) or born prematurely due to other reasons, the opportunity to evaluate the impact that HELLP has on the health of the neonates beyond prematurity itself is lost.[6] This, added to the little power that comparing four deaths vs. 27 survivors represents, explains why only the association between mortality and extreme prematurity in children of mothers with HELLP syndrome was found and prevents accepting as conclusive the assertion about the absence of other factors associated with mortality in these infants as a result of the design used and available patient sample.[7]

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It is undeniable that premature birth represents a significant risk on the biological and social health of those affected, particularly among those of younger gestational age.[8] Gonzalez-Alvarez et al. attempted to estimate the weight of the maternal disease specific to pregnancy-related hypertension and its impact on morbidity and neonatal mortality beyond the intrinsic prematurity. As they propose, there is little information available and conclusions could be contradictory.[9]

Much of this lack of clarity is due to the limited appropriate design. Controls are not always the best and sample sizes may not be a product of a hypothesis a priori but as a result of the fortuitous discovery of an association that focuses attention or inconsistencies on the estimation of exposures or of outcomes.[10] These problems can only improve with the design of more appropriate studies. Sample sizes should respond to the previously established hypothesis and there must be a clear and homogeneous selection of patients exposed and not exposed (for cohort studies) or of patients affected by an outcome of interest and those who serve as contrast (for studies of cases and controls). More homogeneous and rigorous measures must be applied both for the exposures as well as for outcomes. Multicenter studies should be carried out that include all possible variabilities of the factors that could affect the outcomes.[6]

Only then will it be possible to find clarity to understand the role and the burden resulting from any pregnancy-related hypertensive disorder and its impact on the neonate.

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