

The difference between asphyxia, hypoxic ischemic encephalopathy and its management, particularly therapeutic hypothermia, between developed countries and poor or developing countries

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Opinion

Now days we have many advances both in diagnosis and in therapy of the asphyxia and its main complication, Hypoxic Ischemic Encephalopathy (HIE); unfortunately such advances are not distributed in an equitable way between the developed countries and poor or developing countries. While in the first world of this disease has been decreasing as evidence several trials as Garcia Alix trial,¹ has demonstrated the incidence about one per 1000 live birth. In the poor or developing countries actually the real incidence is little known; there is an important problem from Latin America that I believe is similar, in general, in other poor or developing countries in worldwide; generally the health teams doesn't have trained to do the neurological examination of the newborns, furthermore the units doesn't have pediatric neurologist in full time. With these difficulties logic tell us that is impossible to know the real incidence of the HIE. There are some, not exact numbers varying between 5 until 30 per 1000 live births, but an objective data from Brazilian Pediatric Society,² every day between 13 and 15 newborns die due asphyxia in Brazil, that is every day we have about 15 new cases of serious HIE in Brazil.

If we don't have an accurate diagnosis, obviously many newborns are not treated properly; but even if we had a very accurate diagnosis, the access to treatment especially the key point of treatment, Hypothermia, also are not distributed in an equitable way. An example coming from Latin America in the poorest countries is disseminate the use of the artisanal hypothermia (ice water bag, ice cubes around the head or passive hypothermia throughout the treatment) with poor results disseminating the idea that Hypothermia no work. In developing countries from Latin America as Brazil, these differences are observed between richer and poorer states; poorest states repeat the context of the poorest countries in Latin America (artisanal hypothermia), already in the states with more resources something curious happens, private unity are able to buy very expensive equipment to supply hypothermia as mattress made in USA or Europe, however the incidence of the HIE in its patient population (very restricted) is very little. Already the large population is served by the public health system, has a big incidence of the HIE but do not have access servo control equipment to supply hypothermia.

Observing this scenario is easy to understand the differences of the outcomes, in such different realities, this is explain because now days the concern of the service of developed countries is to associate new drugs or gas associate the hypothermia (Epo, melatonin, gas xenon) to increase performance of the treatment. Already in poor or developing countries, the big target is to disseminate adequate concept about therapeutic hypothermia.

I believe that we need to change this situation in poor or developing countries, and it is possible if we develop strategies and we use our local sources. Thinking about this we have developed another newborn neurologic Score (Siben Score³) only clinical neurologic score that directs health teams about newborn neurological examination, besides this we have developed in Brazil, a new equipment (neonatal laminar flow unit^{4,6}) that it's able to supply servo control hypothermia. Despite such a striking difference between developed and poor or developing countries, I believe that we are on the right path to better attend to improve the care of newborns with hypoxic ischemic encephalopathy in these countries.

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None.

Conflicts of Interest

None.

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