



# Unavoided cerebral palsy after induced hypothermia. Sistematic monitoring of effectiveness is needed.



Tânia Moreira<sup>1</sup>, Maria Teresa Folha<sup>2</sup>, Daniel Virella<sup>1,2,3</sup> on behalf of Programa de Vigilância Nacional da Paralisia Cerebral em Portugal

1 – Neonatology Unit, Unidade Local de Saúde São José, Lisboa, Portugal; 2 – Department of Epidemiology, Instituto Nacional de Saúde Doutor Ricardo Jorge, Lisboa, Portugal; 3 – Sociedade Portuguesa de Neonatologia da Sociedade Portuguesa de Pediatria, Portugal.

Background	Objectives	Methods	
<p>Induced hypothermia (IH) reduces the risk of death or cerebral palsy (CP) among term neonates with moderate-to-severe hypoxic-ischemic encephalopathy (HIE). It is now accepted as the standard of care.</p>	<p>We intend to access if the severity of CP among survivors of HIE after IH is similar to their counterparts not submitted to IH or otherwise.</p>	<p>Portuguese Surveillance of Cerebral Palsy registers 5 to 8-year-old children with CP, born since 2011.</p>	
Results			
<p>From 2967 registered children with CP, 790 were identified as been born in Portugal between 2010 and 2016.</p>			
<p>From 86 eligible children (42 born 2010-12, 44 born 2013-16), 35 (42%) had been on IH.</p>			
<p>Overall, children with CP, if had been on IH had higher prevalence of</p>			
<ul style="list-style-type: none"> <li>• Dyskinetic CP 57% vs 35%; p 0.04</li> <li>• GMFCS III-V 80% vs 56.5%; p 0.03</li> <li>• MACS II-V 85% vs 62%; p 0.04</li> </ul>			
<ul style="list-style-type: none"> <li>• Increased CP complexity: 0 indicators 10% vs 16%; 1-2 indicators 33% vs 51%; 3-4 indicators 57% vs 32%; p 0.057</li> </ul>			
<p>No differences were found on the prevalences of epilepsy, higher grade affection on Viking SS or cognition and schooling.</p>			
<p>Children of the 2013-2016 cohort, compared with the 2010-2012 cohort did not reveal significant improvement in any of the clinical or functionality parameters. Instead, a tendency for a higher prevalence of GMFCS III-V was found (p 0.066).</p>			
Conclusions			
<p>Children with CP, if having been on IH, seem to be more likely to have high complexity CP.</p>			
<p>Surveillance data provide useful information on the effectiveness IH to prevent CP after HIE.</p>			
		References	
<p>Shepherd E, Salam RA, Middleton P, Han S, Makrides M, McIntyre S, Badawi N, Crowther CA. Neonatal interventions for preventing cerebral palsy: an overview of Cochrane Systematic Reviews. Cochrane Database Syst Rev. 2018 Jun 20;6(6):CD012409. doi: 10.1002/14651858.CD012409.pub2. PMID: 29926474; PMCID: PMC6513209.</p>			
<p>tania.passeira@ulssjose.min-saude.pt</p>			