



Trends in prevalence of cerebral palsy in children born with a birth weight of 2,500 g or over in Europe from 1980 to 1998.

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Background

We know that children who are born with low birth weight (<2500g) are more likely to have cerebral palsy (CP) than others. However, children who are born with a typical birth weight ($\geq 2500\text{g}$) can also have a CP and as they are much more numerous, they account for more than half of the children with CP.

What was the aim?

Several studies have been done to look at the change or trend in the rate of CP among children with a birth weight in the typical range, but the results of these studies did not agree i.e. the results were different in each study. Thanks to SCPE network, we have data from children with CP born in a lot of countries in Europe, and we wanted to study:

- Whether the rate of CP for children born with a birth weight in the typical range has changed over time;
- Whether there were changes in the clinical types or the severity of CP among these children.

How was the work carried out?

The SCPE database was used to obtain information from 15 registers across Europe. This gave information on a total of 4002 children born between 1980 and 1998 with a birth weight $\geq 2500\text{g}$.

What were the findings?

The rate of CP was 1.14 per 1000 live births for the period. This means that for every 1000 children born with a birth weight in the typical range, one was likely to have CP. The rate did not change much between 1980 and 1998. However, the rate of children with a bilateral

spastic form decreased from 0.58 in 1980 and 0.33 per 1000 live births in 1998 whilst the rate of children with a unilateral spastic form increased from 0.37 to 0.46 per 1000 live births. We also showed that during the same period, the mortality i.e. the rate of deaths of children with a birth weight in the typical range decreased by nearly half (from 1.7 to 0.9 per 1000 live births) and that the rate of children with a moderate (children unable to walk or children with an intellectual quotient below 50) or severe form of CP (children unable to walk and with an intellectual quotient (IQ) below 50) decreased a bit.

What does this tell us?

From this work we know that the rate of CP was stable among children born with a birth weight in the typical range between 1980 and 1998. This may seem disappointing at first glance. However, the mortality (the number of children who died) decreased a lot among children born with a birth weight in the typical range, reflecting progress in neonatal care. Also, although it is difficult to find the reason why the rate of bilateral spastic CP decreased and the rate of unilateral spastic CP increased, it may be that progress in neonatal care led to the decrease of more severe cases.

Further work

We need to follow trends of rates of CP among this population including by subtypes of CP (i.e. bilateral spastic predominant, unilateral spastic predominant, dyskinetic predominant, ataxic). In another study, we observed a decrease in the number of children with CP born with a very low birth weight. This reflected some progress in neonatal care, but this progress was much more important to prevent CP for children born with a very low birth weight. We also need to better understand the reasons for the changes in types of CP.

Paper The full results of this study can be found in European Journal of Epidemiology. 2010 Sep;25(9):635-42. <http://www.springerlink.com/content/a55454667v6364w0/fulltext.pdf>

Pubmed abstract The summary of this study can be found in Pubmed, a database of citations from biomedical journals. <http://www.ncbi.nlm.nih.gov/pubmed/20532622>

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