This was a retrospective study based on the data of births collected by Croatian Institute of Public Health for the year 2018. The study included a total of 2233 children born before week 37 of gestational age, 181 of which were conceived through ART. The prevalence of pathological conditions during pregnancy, delivery, and at birth, known as neurodevelopmental risk factors, was compared between children conceived through ART and those conceived naturally. The Mann-Whitney U test was used to perform data analysis.

Pathological conditions in pregnancy were recorded in 82.3% of children conceived by ART, compared to 58.4% of children conceived naturally (p < 0.001). The most common disorders during pregnancy are twin pregnancy (2.8%), chorioamnionitis (2.8%), and retarded fetal growth (2.8%). On the other hand, in the group of naturally conceived neonates, the most common diagnoses were retarded fetal growth (3.5%) and gestational diabetes (3.0%).

It was observed that the share of children with pathological conditions was significantly higher in the group of those conceived by ART (92.2%) compared to the second group (84.1%) of children (p = 0.003). The diagnoses that predominated among the ART conceived after delivery were neonatal respiratory arrest (24.9%) and low birth weight (14.9%). Additionally, the mean birth weight was significantly lower in the group of children conceived by ART (2170.77 grams), in comparison to another group (2307.68 grams, p=0.015). Nevertheless, groups of neonates did not differ significantly in postnatal mortality (p = 1.00).

Newborns conceived by ART are more likely to suffer from conditions that represent risk for factors for neurodevelopmental disorders. Neonatal respiratory arrest especially represents the risk for the neurodevelopmental disorders. The results of this research are consistent with other published studies, further research is needed to assess other risk factors associated with ART.

476 PERIOD OF PURPLE CRYING PROGRAM FOR THE PREVENTION OF ABUSIVE HEAD TRAUMA/SHAKEN BABY SYNDROME

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To review instances of abusive head trauma in Ireland and the United Kingdom. To discuss the benefits of the Period of Purple Crying program. To begin the pathways to implement the Period of Purple Crying program in Ireland.

Research published since the beginning of the COVID-19 pandemic has shown a marked increase in the instances of abusive head trauma in the United Kingdom. While there are many contributing factors to abusive head trauma, in these cases one of the main precipitants was the enforced isolation during the pandemic. An educational program is needed now more than ever to highlight the drastic consequences of abusive head trauma in infants and educate parents on what level of crying is to be expected from infants.

Areas that have implemented the Period of Purple Crying program have seen a reduction in the numbers of abusive head traumas. Other benefits of the program included an increased awareness among parents of what to do when a baby is crying. Cost-of-illness analysis also shows that the implementation of a program can have massive cost-saving benefits.

Ireland does not currently have a preventative program for shaken baby syndrome. The National Healthy Childhood Programme includes child health screen and developmental surveillance and would be an ideal means by which to introduce the Period of Purple Crying program. This service provides for parent contact with healthcare professionals at least twenty-five times beginning in pregnancy and ending at the child’s third birthday. More research is also needed regarding exact numbers of abusive head trauma in Ireland.