review 107 papers were included to examine serum biomarkers to predict short term outcome.

Raised mean serum levels of IL-6 (p value 0.04, 95% CI -44.5 to -0.66) and lactate (p value <0.001, 95% CI -6.19 to -2.81) are associated with worse short term outcome in NE. The large confidence intervals, however, reflect the small number of studies included and consequently the small population cohorts. Multiple other meta-analyses had substantial heterogeneity and were not statistically significant. A large proportion of studies were excluded due to variety of measured outcomes and methods of data reporting. Establishment of Core Outcomes in NE will benefit future research.

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THE IMPACT OF CHORIONICITY AND ASSISTED REPRODUCTIVE THERAPIES IN OBSTETRIC AND NEONATAL OUTCOMES: A RETROSPECTIVE STUDY IN 1783 PORTUGUESE TWINS

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10.1136/archdischild-2019-epa-59

Introduction Multiple gestations' incidence has risen worldwide in the last years, much due to assisted reproductive therapies (ART).

Monozygotic twins have been associated to adverse neonatal outcomes, however the effect of ART is still unknown.

The goal of this study was to analyze obstetric and neonatal outcomes of twin pregnancies in a level 3 maternity.

Methods A retrospective study including all twins born in a period of 12 years (2003–2014) in a level 3 maternity was conducted. Data were collected from clinical records.

Analysis comparing spontaneous monochorionic and dichorionic twins and spontaneous and ART dichorionic twins were performed.

Results The sample included 1783 newborns from 875 mothers. Mean maternal age was 31 years, with 616 spontaneous pregnancies and 259 through ART.

Prematurity occurred in 77%. Congenital malformations were found in 6%, with cardiac malformation being the most common (n=48), followed by reno pelvic (n=40) and skeletal (n=29). Mortality rate was 3% (n=51).

- Spontaneous monochorionic and dichorionic twins

A total of 1202 newborns were found, 428 monochorionic and 774 dichorionic.

Gestational diabetes was more common in dichorionic pregnancies (9% vs 5%, p=0.009).

Monochorionic twins had higher prematurity (79% vs 72%, p=0.017) and very low birthweight (VLBW) rate (19% vs 14%, p=0.015).

Congenital anomalies (9% vs 6%, p=0.022), especially cardiac malformations (4% vs 2%, p=0.013), Respiratory Distress Syndrome (23% vs 18%, p=0.049), patent ductus arteriosus (7% vs 4%, p=0.021), anemia (11% vs 5%, p<0.001), periventricular hemorrhage (5% vs 3%, p=0.047), cardiac (7% vs 4%, p=0.019) and surgical (4% vs 2%, p=0.026) diseases, mechanical ventilation (16% vs 10%, p=0.001) and mortality (4% vs 2%, p=0.015) were higher in monochorionic twins.

- Dichorionic spontaneous and ART twins

The sample included 1264 newborns (770 spontaneous and 464 ART).

Maternal age > 35 years (35% vs 27%, p=0.006), gestational diabetes (14% vs 9%, p=0.006) and hypertension (12% vs 7%, p=0.002) were more common with ART.

Alcohol (1 vs 0%, p=0.028) and tobacco (18% vs 6%, p<0.001) consumptions were higher in spontaneous pregnancies.

Prematurity (72% vs 79%, p=0.01) and VLBW (18% vs 14%, p=0.03) were higher in ART twins.

There was no difference in the rate of congenital malformations.

Conclusion As described in the literature, monochorionic pregnancies were associated to worst obstetric and neonatal outcomes.

In this study ART was associated with higher risk of prematurity and very low birthweight. Unlike what has been described, ART was not associated with congenital anomalies.

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NEONATAL ABSTINENCE SYNDROME (NAS): HOW THE TIMING OF PRESENTATION INFLUENCES A SAFE DISCHARGE POLICY

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10.1136/archdischild-2019-epa-60

Background Incidence of NAS from in-utero exposure to opioids has increased dramatically over the years in parallel with the general opioid uptake in societies. Management of NAS places social, emotional and financial burden on families and the health care systems. Age at which symptomatic NAS require pharmacological treatment is reported variably. Consequently, there is lack of consensus regarding the duration of observation to ensure safe discharge of the infant.

Objective To determine the optimal duration of postnatal hospital observation for at-risk infants following in-utero exposure to opioids.

Design/Methods A retrospective 5 year review of infants (≥36 weeks gestation) born between 2013–2017 to mothers with opioid dependency. Maternal and infant characteristics were abstracted from patient records and electronic database of the Mother and Child Dependency Program at Metro Health System, Cleveland, Ohio, USA. Age in hours of life (HOL) when pharmacological treatment was started for NAS as per guidelines was noted and confidence interval was defined. We compared infants who required pharmacological treatment within 96 to those who were treated beyond 96 hours using non-parametric tests.

Results Of the 355 infants with in-utero opiate exposure studied, 255(88.4%) required pharmacological treatment for NAS. Medications were initiated at a median age of 44.5 HOL (IQR 23–74.5 hours). 90±3% of infants were commenced on pharmacological treatment by 96 HOL; 93±3% by 120 HOL and 98±1% by 168 HOL (Figure-1). Infants who received treatment within 96 HOL (n=199) compared to those treated at >96 HOL (n=26) were more likely to have a urine toxicology positive for both mother and baby, have higher mean NAS score in first week of life, require a higher maximum dose of morphine and longer hospital stay. After adjusting for gestational age, breast milk exposure, methadone vs. buprenorphine maintenance programme, NICU vs. Special Care Unit admission; infants and mothers negative for drug