Intrauterine Vascular Growth Retardation in 150 Cases at Ehs Nouar Fadela: Preliminary Results

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ABSTRACT

Intrauterine growth retardation represents the third cause of neonatal morbidity and mortality after prematurity and malformations. This pathology is a real public health problem.

Objectives: To determine the epidemiological profile of IUGR newborns, their morbidity and mortality, their immediate fate and to evaluate the correlation between certain maternal parameters and IUGR.

Methods: This is a descriptive and analytical study conducted between January 2012 and January 2014, the results were processed on software 3.5.3 Epi info.

Results: We recorded 8114 deliveries including 150 newborn IUGR cases, representing 1.8% of births. For the maternal characteristics: the average age was 31 ± 6.7 years. The percentages of pre-eclampsia, gravidic hypertension and chronic hypertension were found respectively in 60%, 31.3% and 4.7% of the pregnant women. Prematurity was noted in 82.1% with an average gestational age of 35.2 ± 2.7 years, 86% of the cases were extracted by the high route right away. Neonatal complications were dominated by perinatal asphyxia (5%), hypoglycaemia (4%) and respiratory distress (2%).

Conclusion: Efforts remain to be made in terms of screening, prenatal consultations and management of pregnant women with IUGR in order to improve the neonatal prognosis.

Keywords: Growth retardation, hypertension, hypoglycemia.

I. INTRODUCTION

Intrauterine growth restriction is defined as "a fetus or newborn with a weight estimate below the 10th percentile. It is the third leading cause of neonatal morbidity and mortality after prematurity and malformations. This pathology is a real public health problem.

II. OBJECTIVES

The aim of our study is to determine the epidemiological profile of IUGR newborns, the morbidity and mortality of these newborns, their immediate fate and to evaluate the correlation between certain maternal parameters and IUGR.

III. METHODS

This is a descriptive and analytical study conducted between January 2012 and January 2014 during which all IUGR cases were recorded on pre-established and coded data sheets, the results were processed by the software: Data entry and analysis on software 3.5.3 Epi info.

IV. RESULTS

We recorded 8114 deliveries including 150 newborn IUGR cases, representing 1.8% of births. For the maternal characteristics: the average age was 31 years ± 6.7 years, maternal BMI of an average of 29.4 ± 4.2 kg/m², diabetes was found in 4% of cases. The percentages of pre-eclampsia, gravidic hypertension and chronic hypertension were found respectively in 60%, 31.3% and 4.7% of the pregnant women.

Prematurity was noted in more than half of the cases (51.3%) and multiparity was 6%. Prematurity was noted in 82.1% with an average gestational age of 35.2 ± 2.7 years. Extraction was carried out in 86% of the cases by the high route immediately.

Neonatal complications were dominated by perinatal asphyxia (5%), hypoglycaemia (4%) and respiratory distress (2%). Death during the first 48 hours was 13.5% compared to a rate of 1.5% in the month following birth, i.e. a mortality rate of 15.3%.

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In our study, a correlation was found between maternal age and fetal weight (p=0.04), the most common medical history was hypertension and diabetes (chronic, gravidic or pre-eclampsia) linked to the severity of IUGR (P=0.005) and overweight was identified as a factor aggravating the severity of IUGR (P=0.04).

A. Characteristics of RCIU Mothers

High blood pressure and/or diabetes (type II, gestational) were the most frequent pathologies found in our study, with a rate of 16.7%.

We classified our patients into nulliparous, primiparous (1 delivery), paupurous (2-3 deliveries), multiparous (4-5-6 deliveries) and grand multiparous (7 or more deliveries).51.3% of our population was nulliparous, followed by pauporous with 42.7%.

B. Characteristics of the New Born RCIU

The average weight of the newborn in our study was 2010.9±369 g, with extremes ranging from 609 g to 2500 g. 87% of the newborns had a birth weight of over 1500 g. 52.7% of the newborns were male. The sex ratio was 0.9.

V. DISCUSSION

In our study comparing risk factors and severity of IUGR, maternal age of more than 35 years stands out as a risk factor, our results are consistent with most studies [1].

In our study 80.7% of the gestational carriers with vascular IUGR had a moderate and 10.7% a high socioeconomic level; only 8.6% of our gestational carriers had a low socioeconomic level. In our analysis we did not find a relationship between IUGR severity and socioeconomic level, these results are not consistent with the literature [2], [3].

The most common medical history was hypertension (chronic, gravidic or pre-eclampsia) with a rate of 12.6%, followed by diabetes (1.2%) or gestational diabetes (6.6%). In our study, these medical histories were significantly (p=0.005) related to the severity of IUGR. In the literature, all studies concerning the risk factors of IUGR of vascular origin have found an increased risk of IUGR.

In case of a history of hypertensive disorders: chronic hypertension, pre-eclampsia [4], [5] and gestational hypertension. In our study nulliparous women represent more than half of our population (51.30%) while there were no very large multiparous women [6]-[9].

In the literature, according to a meta-analysis of five large observational studies [9] of live births up to 2009, primiparity and very large multiparity were associated with IUGR.

In our study, 83.3% of our pregnant women were overweight and obese, none were underweight, and overweight was identified in our analysis as a factor that aggravated the severity of IUGR (p=0.04). In the literature and according to the meta-analysis of [12] from 4 cohort studies a BMI<18.5 was significantly associated with a higher risk of IUGR; the study of [13] however described obesity (BMI>30) as a less influential risk factor.

VI. CONCLUSION

Screening for intrauterine growth retardation is essential because of the significant associated fetal mortality and morbidity, and is based on monitoring uterine height in conjunction with screening and management of maternal pathologies that may be responsible for the retardation. The diagnosis will be based on both clinical examination and, nowadays, ultrasound. The measurement of uterine height has a definite diagnostic value that should not be overlooked, particularly to direct [10]-[12].

The patient towards a follow-up ultrasound examination. Vascular causes are the main etiology. The proportion of idiopathic IUGR is not negligible. Delivery methods depend on the knowledge of the IUGR and the aetiology. Caesarean sections are more frequent for IUGR of vascular origin, which are more at risk of decompensation. For this same group, the short-term neonatal prognosis seems more reserved. Thus, for these IUGR of vascular origin known antenatally, appropriate monitoring is essential to look for signs of severity and act accordingly. Screening and diagnosis of IUGR requires particular attention during pregnancy monitoring as diagnosis is still imperfect at present. The search for maternal risk factors that may affect foetal growth is important. Efforts still need to be made in terms of screening, prenatal consultations, and management of pregnant women with IUGR in order to improve the neonatal prognosis [13].

CONFLICT OF INTEREST

Authors declare that they do not have any conflict of interest.

REFERENCES


