

Three years review of intrauterine growth restricted babies, management and outcome

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Objective

Intrauterine growth restriction (IGR) refers to poor growth of a baby during pregnancy. There are many different causes but most often involve poor maternal nutrition or lack of adequate oxygen supply to the fetus. At least 60% of the 4 million neonatal deaths that occur worldwide every year are associated with low birth weight (LBW), caused by intrauterine growth restriction (IUGR), preterm delivery, and genetic/chromosomal abnormalities demonstrating that under-nutrition is already a leading health problem at birth. IUGR can result in the baby being small for gestational age (SGA), which is most commonly defined as an estimate fetal weight below the 10th percentile for the gestational age and therefore in a LBW. There are 2 major categories of IUGR: symmetrical and asymmetrical. Some conditions are associated with both symmetrical and asymmetrical growth restriction. Asymmetrical IUGR is less common (20%). In asymmetrical IUGR, there is restriction of weight followed by length. The head continues to grow at normal or near-normal rates (head sparing). This type of IUGR is most commonly caused by extrinsic factors that affect the fetus at later gestational ages. Specific causes include, chronic hypertension, severe malnutrition and genetic mutations such as Ehlers–Danlos syndrome. Symmetrical IUGR is more common. It indicates that the fetus has developed slowly throughout the duration of the pregnancy and was thus affected from a very early stage. The head circumference of such a newborn is in proportion to the rest of the body. Since most neurons are developed by the 18th week of gestation, the fetus with symmetrical IUGR is more likely to have permanent neurological sequela. Common causes include, early intrauterine infections, such as cytomegalovirus, rubella or toxoplasmosis, chromosomal abnormalities, anemia, maternal substance abuse e. g. prenatal alcohol use resulting in fetal alcohol syndrome. Early detection of this IUGR babies is crucial to plan for further prenatal management and delivery.

Methods

We conducted a retrospective study of all patients diagnosed with LBW or IUGR babies over a three year period, from 2011 to 2014, who booked at Epsom General Hospital NHS Trust, UK. Using patient records, ultrasound scan reports and our electronic labour ward system Protos, we were able to determine the number of pregnancies where IUGR was detected within this time period and analyze our findings. We collated the data into a standardized proforma and then divided the data in subcategories according to our objectives.

Results

To follow.

Conclusion

IUGR affects 3-10% of pregnancies. 20% of stillborn infants have IUGR. Perinatal mortality rates are 4-8 times higher for infants with IUGR and morbidity is present in 50% of surviving infants. Adequate training for all staff especially midwifery colleagues and community midwives together with serial growth scans are essential for early detection of these cases.