possible under careful nursing just after birth and should be promoted.

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REAL-TIME GLUCOSE MONITORING AND GLUCOSE CONTROL IN THE EXTREMELY PRETERM INFANT DURING THE FIRST WEEK OF LIFE

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Background: Hyperglycaemia is a metabolic disturbance affecting up to 80% of extreme preterm babies. It increases the risk for mortality and morbidity in this population. The current therapeutic approach for hyperglycaemia in our unit involves treatment with insulin infusion. Continuous glucose monitoring systems have been shown by our group and others to accurately reflect blood glucose levels in preterm infants. Our hypothesis is that new generation monitors that allow immediate access to glucose values by the clinician will improve glucose control in these patients.

Materials and methods: 11 patients ≤29 weeks and/or ≤1000g were monitored for the first week of life using a real-time glucose monitor (RT-Guardian®, Medtronic), in which glucose values are visibly displayed and continuously available. These data were compared to the values of 10 clinically matched premature babies obtained with a blinded device (CGMS®- Gold, Medtronic), with delayed access to the data after computer download.

Results: There was a non-significant trend to longer periods of normoglycaemia in the Real-time Group. Amongst the patients requiring insulin infusion, higher doses could be used safely in the Real-time Group with no recorded episodes of hypoglycaemia. The number of heel pricks for the management of insulin treatment was significantly higher in the group with CGMS® Gold blind monitoring. No complications due to the use of the devices were detected in either group.

Conclusions: Real-time continuous glucose monitors are safe devices that have huge potential for the improvement of glucose control and insulin therapy management in the extremely preterm population.

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INBORN ERRORS OF METABOLISM (IEM) IN INFANTS ADMITTED TO INTENSIVE CARE UNITS: A STUDY ABOUT DIFFERENT INVESTIGATIONAL STRATEGIES

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Background and aims: IEM are genetic diseases the majority with recessive inheritance and varied clinical presentation that turn diagnosis into a challenge. Especially in developing countries, knowledge of IEM by health professionals is restricted. In order to overcome this problem, an Information Service on IEM (SIEM) was created in Brazil, being a pioneering service in Latin America. SIEM is operating in the Genetics Service of HCPA since October 2001, helping physicians to diagnose suspected patients as a toll-free service. For each consultation a follow-up is conducted and the case is considered "concluded" after its diagnosis is confirmed and classified as metabolic disease or not. Some cases remain undiagnosed. This study aims to compare investigational strategies in infants admitted to ICU under 1y-old, in order to emphasize personal investigation and remote advisement in diagnosis.

Methods: Cross-sectional study of 3 groups of children suspected to present an IEM, to be developed in 24 months, enrolling patients of NICU or PICU of HCPA, or suspected cases that consulted to SIEM, or even suspected cases which their biological samples were sent to IEM Laboratory of HCPA.

Results: We did not find any paper comparing investigational strategies, that´s why this study is important. Giugliani et al, in 1991, diagnosed IEM in 8% of suspected samples and Sanseverino studied ICU suspected patients confirming 13%. Unpublished data from SIEM showed a prevalence of 16%.

Conclusions: we estimate to study 225 for each group to find a difference of at least 8% between SIEM cases and laboratory cases.