Outcomes	Length of Hosp. Stay	H. Admission		iv Fluid-Therap.	
		YES	NO	YES	NO
Group A WITH mdG	5,6 h (2-26)	1 (14,3%)	6	1 (14,2%)	6
GroUp B WITHOUT mdG	21,6 h (2,5-60)	16 (85,7%)	5	18 (76,2%)	3
Glycemic ↑ post-mdG: 47 mg/dl (18-66) Glycémie after-mdG (30'-60') 139,6 mg/dl (104 -146)		Relative Risk: 0,166 = 1/6 (CI 95: 0,05-0,49)		Relative Risk: 0,19 = 1/ 5,3 (CI 95: 0,123-0,28)	

[Glucagon_md_outcomes]

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BONE STATUS IN CHILDREN AND ADOLESCENTS WITH TYPE 1 DIABETES MELLITUS: CURRENT CONCEPT

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Background: There is recent considerable evidence supporting vitamin D deficiency role in pathogenesis of type 1 diabetes mellitus (T1DM) resulting in alteration in bone metabolism and structure and higher risk of related complications later in life.

Aim: The present study aimed to evaluate alteration of bone status and possible association between 25-hydroxy D3 [25 (OH) D3], parathormone [PTH], insulin growth factor -1 [IGF-1] serum profiles, glycemic control and disease duration with bone mineral density (BMD) in a children and adolescence with uncomplicated T1DM.

Methods:

Thirty six children and adolescents (mean +/- SD age, 10.38 +/- 3.17 years) with T1DM were matched with 15 (8.47 +/- 4.17 years) healthy controls. Serum levels of 25 (OH) D3, PTH, IGF-1 were measured by ELISA while, glycosylated hemoglobin (HbA1c), calcium (Ca), inorganic phosphorus (PO₄) by

spectrophotometer. Bone quality was determined by dual energy X-ray absorptiometry (DEXA).

Results: Children and adolescents with T1DM showed increased serum levels of PO₄ and PTH and decreased calcium, IGF-1, 25 (OH) D3. About 52.8% of our patients had insufficient 25 (OH) D3 levels. Abnormal bone status was found in arm, ribs, T-spine, L-spine, leg, total body while head showed normal bone currency. Longer diabetic duration and poor metabolic control had a negative; meanwhile PTH, IGF-1 had a positive impact on bone mass.

Conclusions: Given that individuals with T1DM possess multiple risk factors for skeletal fragility, ensuring vitamin D sufficiency throughout childhood and adolescence in this population seems especially warranted.

Keywords: Bone mineral density; Type 1 diabetes mellitus

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CHANGES IN THE BCAA METABOLISM IN NORMAL AND DIABETIC PREGNANCIES. IMPLICATION FOR MATERNAL-FETAL INTERMEDIARY METABOLISM

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Although previous studies have underlined the importance of branched-chain aminoacids (BCAA) in normal pregnancy, little is known with regard to the metabolism of BCAA in diabetic pregnancy.

Objective: To delineate the role of the BCAA metabolism in normal and diabetic pregnancies and their significance in fetus/neonate metabolism.

Methods: Concentrations of leucine and valine were measured in 43 pregnant women (17 diabetic and 26 non-diabetic) before delivery and in their neonates at birth. The reference group consisted of 6 non-pregnant women. BCAA evaluation was performed in dry blood spot by using Tandem MS/MS technology.

Results: Leucine levels (mean $\pm$ SD) in normal (65.3 $\pm$ 12.3mcM) and diabetic (80.7 $\pm$ 21.4mcM) pregnancies were significantly lower than in controls. (95.5 $\pm$ 6.6mcM, $p < 0.001$ and $p = 0.051$, respectively). Mean valine levels were significantly higher only in diabetic pregnancies (87.5 $\pm$ 26.2mcM) as compared to the control (65.1 $\pm$ 7.6mcM, $p = 0.011$). Moreover, leucine and valine concentrations in diabetic pregnancies, were significantly higher than in normal pregnancies. Despite the different concentrations of both aminoacids in diabetic and normal pregnant women, their neonates had comparable concentrations in leucine (84.5 $\pm$ 11.2mcM vs 80.9 $\pm$ 18.4mcM) and valine (93.7 $\pm$ 14.4mcM vs 82.2 $\pm$ 21.6mcM).

Conclusions: BCAA levels are increased in diabetic pregnancies probably due to a counter balancing mechanism to improve the disturbed glucose homeostasis. More concretely, the increase of BCAA induces two distinct metabolic pathways with following production of two different intracellular end products, glucose and /or ketone bodies, balancing in this way the decreased amount of glucose entering the cell in women with gestational diabetes.

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DEVELOPING PAEDIATRIC PAIN MAPS IN THE ACCIDENT AND EMERGENCY DEPARTMENT

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Background and aims: The College of Emergency Medicine has consistently identified pain score recording as essential in the provision of adequate analgesia in the Paediatric acute care setting. This study recorded patients' stated pain scores in real-time at set defined time points.

Methods: A prospective, observational pilot study utilising convenience sampling of children aged 5 - 15 years was conducted in the Ormskirk District General Hospital Paediatric Emergency Department, UK (20,815 presentations pa) 10 - 24th July 2009. Self-reported pain scores in acute pain were recorded every 15 minutes for 4 hours, using a combination of a numeric rating scale from 0-10 and the Wong-Baker FACES pain scale.

Results: During the study period 54 patients were enrolled, 7.27 % (n = 743) of the attendances, with 47 completing the 4 hour pain score period.

All patients showed a reduction in their pain scores compared to their pain score on presentation. Maximal pain score reduction occurred within 1 hour (varied treatment regimes - medical / non-medical). Some patients showed secondary peaks in pain towards 4 hours.

Conclusions: Mapping patients' pain through sequential pain scoring should provide valuable information to predict intervention responses and in the future may be facilitated by a patient-controlled real-time pain assessment electronic device. In addition we envisage calculating the area under the curve for pain versus time graphs, which may make us re-evaluate moderate pain regimes.

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DILEMMA OF DIAGNOSES IN NEONATAL INTENSIVE CARE UNIT IN SUB-SAHARAN AFRICA

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Background and aims: Neonatal period in sub-Saharan Africa is characterized by various infectious diseases that make up leading causes of morbidity and mortality in this part of the world. The main objective of this study is to document frequently diagnosed illnesses in early, mid and late neonatal periods, record management of the ill neonate and scrutinize clinicians' prescription patterns.

Methodology: This was a health facility-based retrospective case review of records of children admitted into the intensive care unit (ICU). Records of all neonates admitted from March 2005 to February 2007 were extracted for analysis.

Results: Two hundred and twenty four neonates (135 males; 89 females), disaggregated into different age groups, were admitted into the ICU during the period of study. The main diagnoses *in early, mid and late neonatal periods* were birth asphyxia (63%) and neonatal septicaemia (50%), neonatal septicaemia (46%) and neonatal jaundice (15%), bronchopneumonia (50%) and neonatal meningitis (30%) respectively. Common investigations requested for across different age groups were full blood count, electrolyte, urea and creatinine, and