

G482(P) ABSTRACT WITHDRAWN

G483(P) NATIONAL SURVEY OF MANAGEMENT DURING ILLNESS (SICK-DAY) OF TYPE 1 DIABETES IN CHILDREN AND YOUNG PEOPLE

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Aims Adequate sick day management at home may reduce the risk of progression to diabetic ketoacidosis (DKA) and admission to hospital. The UK does not have a consensus guideline for sick day management advice to children and young people with Type 1 Diabetes. Children's diabetes services vary in their practice of education and advice in the use of urine or blood ketone monitoring during illness. The aim of this project was to look at the variation of management of diabetes during illness.

Methods A survey was conducted by the Association of Children's Diabetes Clinicians (ACDC) who sent out questionnaires to all units managing children and young people with Type 1 Diabetes including: local sick day management rules, out of hours diabetes support for families and information about the local diabetes service.

Results Table 1 90/127 (71%) of the units responded to the survey. There were 13 tertiary centres. Median number of children per service was 165 (range 73–450). The majority of units (96%) have a sick day management guideline in place.

Abstract G483(P) Table 1 Results of survey

Extra insulin given	71% Based on total daily dose, 23% Units/kg, 6% Other locally derived rule
Ketone monitoring	58% Blood ketones, 4% Urine ketones only, 38% used both
Out of hours advice for diabetes patients	52% Paediatric Registrar, 14% Diabetes nurse specialist or diabetes consultant, 14% Diabetes nurse specialist / diabetes consultant on a joint rota, 11% from diabetes team in the evenings/weekends and Paediatric on-call overnight

Conclusion There was a wide variation in the practice of monitoring and advice given during illness. All guidelines advised increased doses of insulin during sick days but there was no consensus on how to calculate increased doses. There were also variations in the use of ketone testing and frequency on blood glucose monitoring. Some units still use urine ketone testing routinely. There is a need for evidence based National guidance to be in place.

G484(P) IS MEAN BLOOD SUGAR MONITORING WITH SMART METRE A BETTER INDICATOR OF CONTROL THAN HBA1C IN PAEDIATRIC DIABETES?

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Aim SMART metres have taken paediatric diabetes management closer to home. Aim of our project was to enhance the learning with patients and their families toward home management thereby decreasing the need for hospital admissions and continuing support with the Diabetes MDT. SMART metre download review is a good way of analysing blood sugars targets, variability and control over a period of time.

Methods Patients and their families were taken through a process of ongoing learning to review and analyse SMART metre downloads and make appropriate changes to their insulin needs to prevent high and low sugars. The MDT had an oversight of the process to actively facilitate the learning. Data was collected from January 2014 to June 2014. A retrospective analysis was done on prospectively collected database of blood sugar downloads from SMART metres and near patient A1C tests.

Results Mean A1C for 100 downloads was 9.8 mmol/L that was comparable to a mean blood sugar of 9.6 mmol/L with a mean standard deviation of 4.7. However this correlation changed when the data was stratified based on Standard deviation (SD).

1. With SD < 2, the average A1C was 7.6 mmol/L compared to average mean blood sugar of 5.53 mmol/L.
2. SD between 2– 4, co-related mean A1C of 8.7 mmol/L to average mean blood sugar of 7.9 mmol/L.
3. Surprisingly when SD was >4, the mean A1C–10 mmol/L and the mean average blood sugars–9.97 mmol/L were exactly the same.
4. This gap was widening the opposite way when the SD was >6 with A1C of 11.6 mmol/L compared to average mean blood sugar of 12.4 mmol/L.

This modality of reviewing and analysing results lead to better patient empowerment and care of their diabetes. Better control leads to better quality of life and comfort and confidence the children and their families with diabetes. There has been a 50% reduction of DKA and hypoglycaemia admissions on the ward with the use of SMART metres

Conclusion Simple SMART metres analysis are effective predictors for diabetes monitoring with average mean blood sugars which are well different to the nearer patient HbA1c and it bears a correlation between standard deviation of 4–6 with increasing gaps on both sides of the spectrum.

G485(P) ACQUIRED HYPOTHYROIDISM IN INFANTILE PERITONEAL DIALYSIS: THE ROLE OF IATROGENIC IODINE EXPOSURE

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Povidine-iodine within disconnect caps of peritoneal dialysis (PD) sets have been reported to potentially contribute to hypothyroidism^{1–3}. The Medicines and Healthcare Products Regulatory Agency (UK) alert (2006) for PD caps, suggests this is more likely to affect infants and children with smaller peritoneal fill volumes, where higher dialysate iodine concentrations can result. We report two infants with end-stage renal failure (ESRF) receiving continuous cycling peritoneal dialysis (CCPD) who developed hypothyroidism. Both infants had normal newborn blood spot screening (TSH <6 mu/L), indicating an acquired cause.