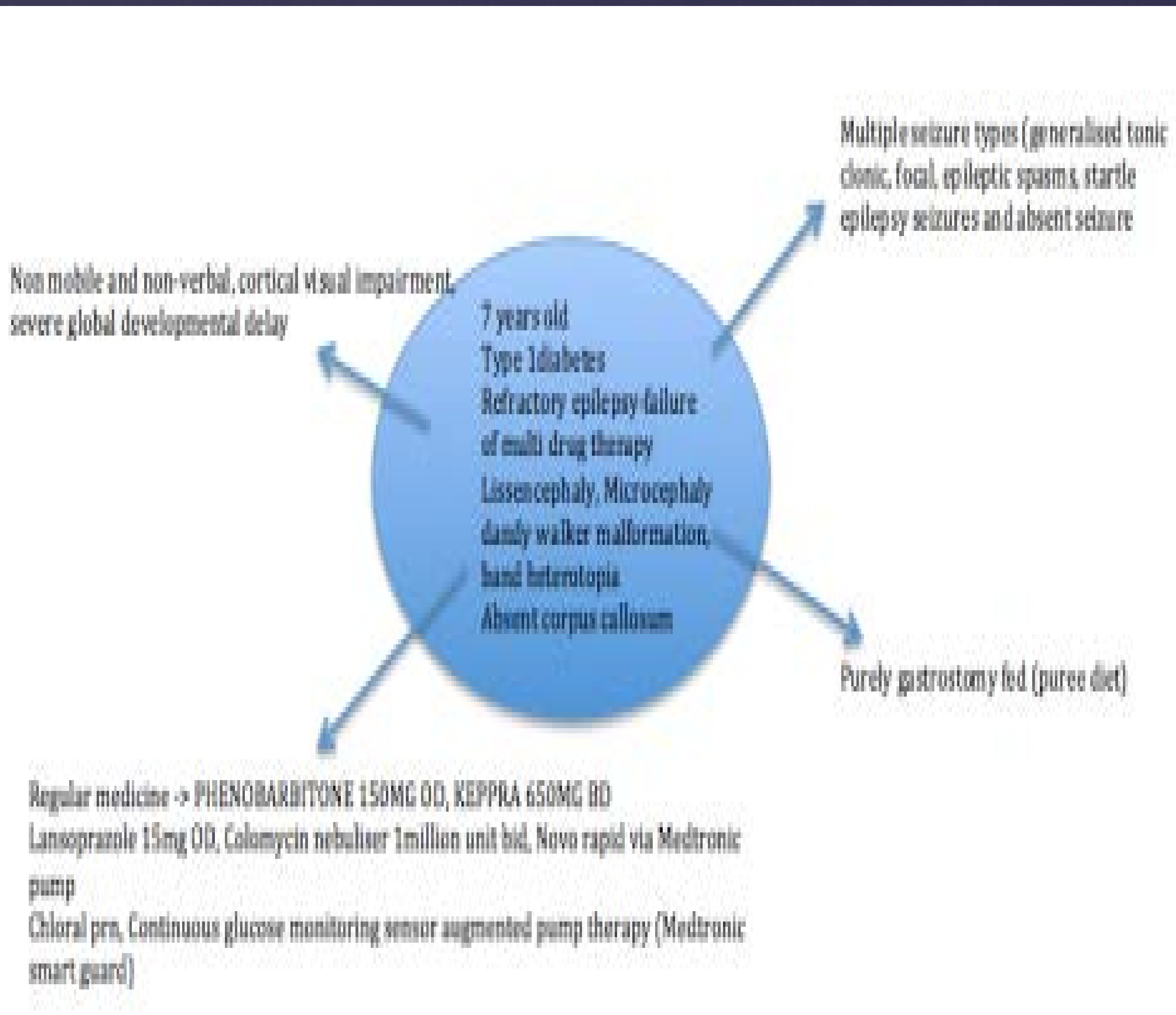


Ketogenic diet in a child with diabetes and global developmental delay

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Introduction

- Used effectively in type two diabetes, epilepsy in diabetes, pyruvate dehydrogenase deficiency
- Challenging in achieving ketosis without DKA
- The high fat diet regimen of the ketogenic diet (70-90% of calories)



Ketogenic diet plan

- 3x amino acid mix 200g
- 930 kcal/day , 24g protein, 90g CHO, 60g LCT
- If medicine >1G of CHO → add to diet
- Aim for ketone level 2-3 –achieved in 5 weeks
- On ketogenic diet for 4 months

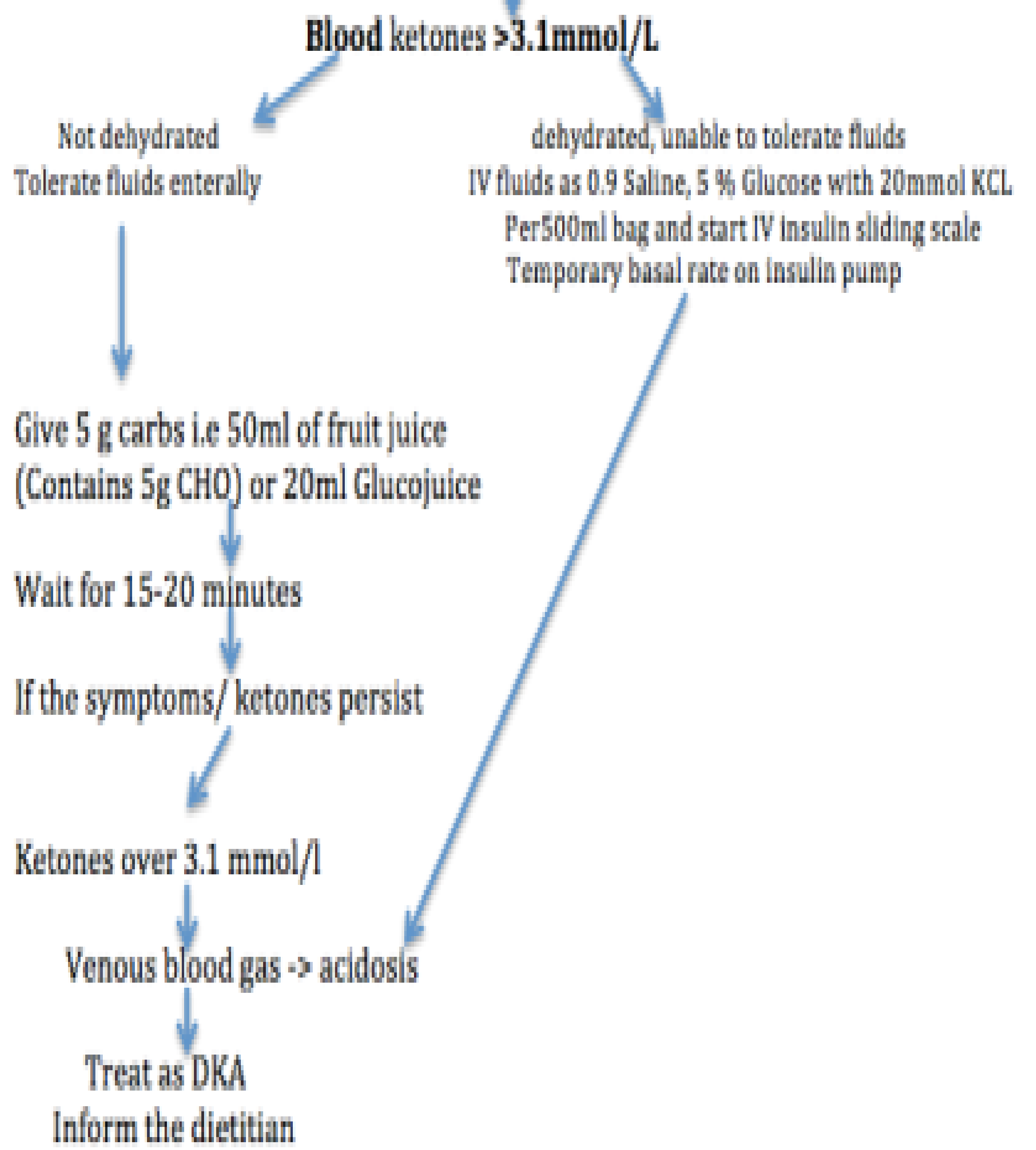
Daily Management

- Check ketone 4 times per day
- At home Optimum Neo (Abbott) or Glucomen Aero 2K meter
- Blood gas weekly
- Support day-to-day management including sick day management

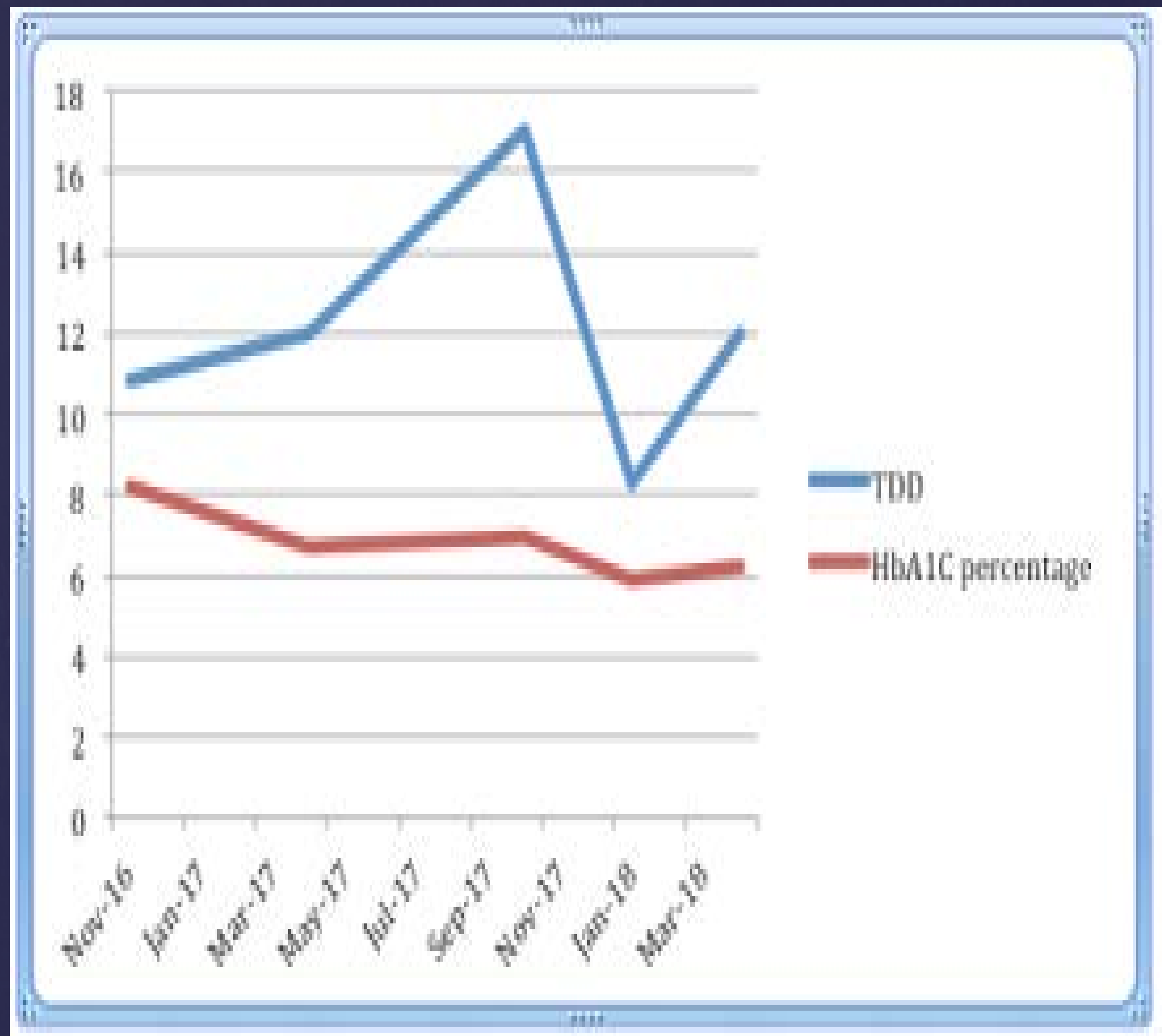
Signs and symptoms of ketosis

- rapid, panting breath ('Kussmaul' breathing)
- increased heart rate
- facial flush
- irritability
- vomiting
- unexpected lethargy
- Important:** Excess ketosis may also mimic non-convulsive status as the children are often less responsive

Signs and symptoms of ketosis present without acidosis (Ph < 7.3 and HCO₃ < 18mmol/l)



Effects on total daily dose and HbA1C



Challenging factors

- Limited resources / literature
- To achieve ketosis without acidosis
- Preventing hypoglycemia
- Non verbal → dependent on identifying clinical symptoms to ensure consistency and safety

DISCUSSION

- Ketosis without acidosis and achievable by careful monitoring
- Helps in controlling HbA1C level
- There is reduction in total daily dose of insulin

