

IMPACT OF CONTINUOUS GLUCOSE MONITORING SYSTEM ON THERAPY OF CYSTIC FIBROSIS RELATED DIABETES IN CHILDREN AND YOUNG ADULTS

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INTRODUCTION

Cystic fibrosis related diabetes (CFRD)

- One of the most common complication of CF
- Great impact on:
 - Progressive deterioration of lung function
 - Poor growth
 - Increased mortality
- Need for early detection of disturbance of glucose metabolism
- Current recommendations
 - Screening begins at the age of 10
 - Oral glucose tolerans test (OGTT)
 - It can't reveal the initial glucose disturbance

Continuous glucose monitoring system (CGMS)

- Application of this method for diagnostic purposes in CF – not yet
- Earlier detection of hyperglycemia enables interventions – dietary changes or introducing insulin therapy

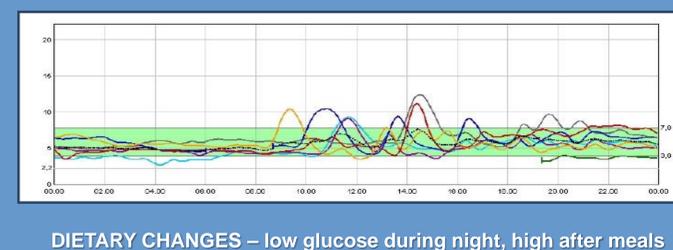
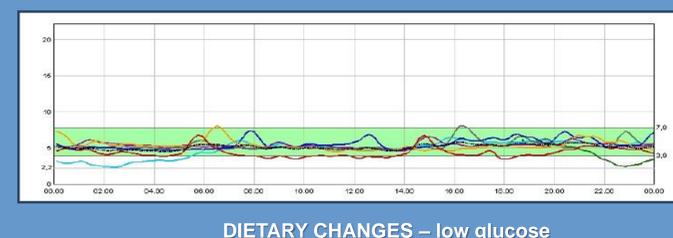
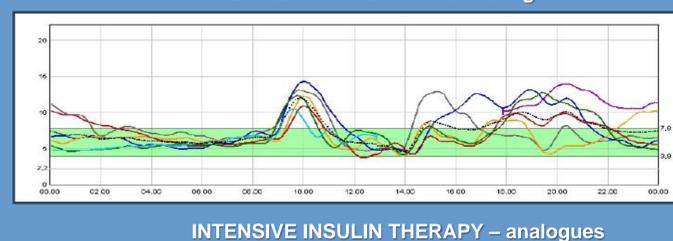
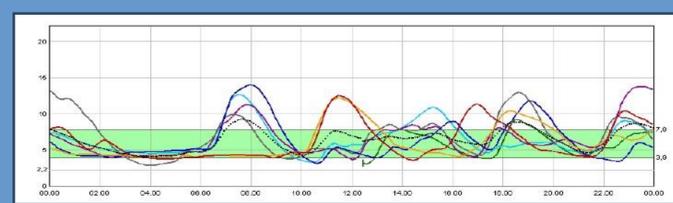
METHOD

- Patients were recruited during 2015.
- Glucose meters and strips were provided
- 4 blood glucose measurements (BGM) per day
- CGMS - iPro2 Medtronic, 7 days
- Diary for all BGM and food intake
- No corticosteroid therapy

RESULTS

- 10 patients (4 males)
- Mean age 22.4 years (11.1-36.7)
- CGMS:
- In all – glucose peaks > 11 mmol/l
- After meals even above 19 mmol/l
- Asymptomatic low glucose – in 9

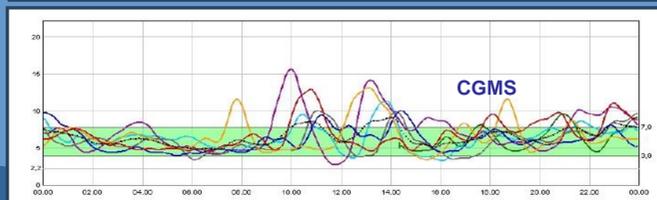
TREATMENT



OBJECTIVE

- Evaluate the profile of glucose in patients with CF followed up in a single centre
- Indications for CGMS:
 - Abnormalities during OGTT
 - Hyperglycaemia detected during regular visits

GLUCOSE METABOLISM TESTS



CONCLUSIONS

- We observed abnormal glucose values in almost all patients
- It's seems that CGMS allows better insight in glucose impairment than OGTT
- CGMS can reveal elevated glucose in real time, during normal activities
- Insulin therapy can be initiated early (4 patients)
- Dietary habits changes – all 10

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