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Prevalence of dumping syndrome after a surgery for oesophageal atresia type C without fundoplication *-preliminary results -*

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Context

- Main cause of dumping syndrome (DS) = antireflux surgery

- *Michaud L. et al.,* ***Dumping Syndrome after esophageal atresia repair without antireflux surgery****, J Pediatr Surg, 2010*
  - Type A OA, 3 mths, feeding difficulties, undernutrition and watery stools
  - Type A OA, 6 mths, seizures and hypoglycemia

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Hypothesis and Aim

- DS due oesophageal atresia (OA) and/or primary anastomosis?
- DS to consider in every OA child?

To assess the prevalence of DS in infants operated for OA

- Prospective, french multicentric study (soon international: Sydney including)
- Infants with type C OA, < 3.5 mths, > 4.150 kg

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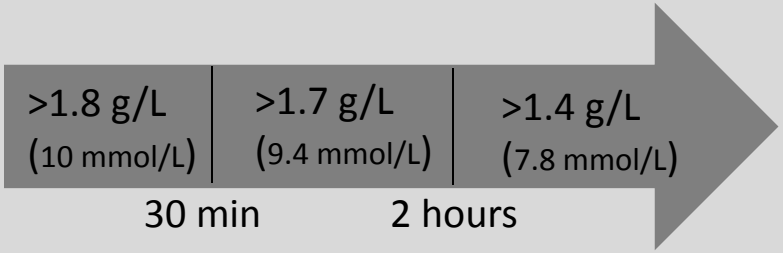
Methods

- Oral Glucose Tolerance Test, 1.75 g/kg oral glucose intake
- Glycemia measures: /30 minutes (2 hours) and/hour (until 4 hours)

DS = **Early hyperglycemia**

AND/OR



Late hypoglycemia < 0.6 g/L (3.33 mmol/L)

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Results - Prevalence

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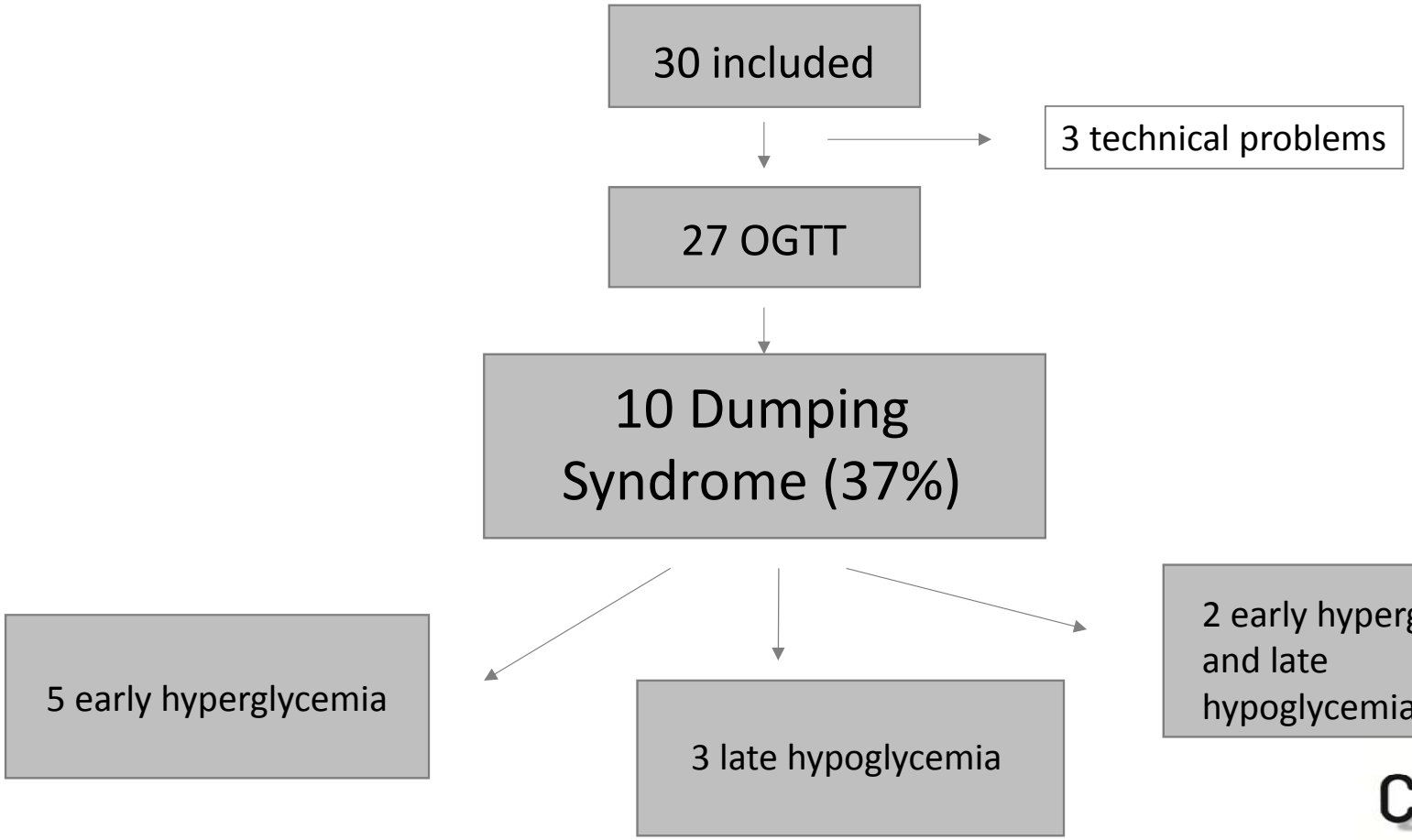

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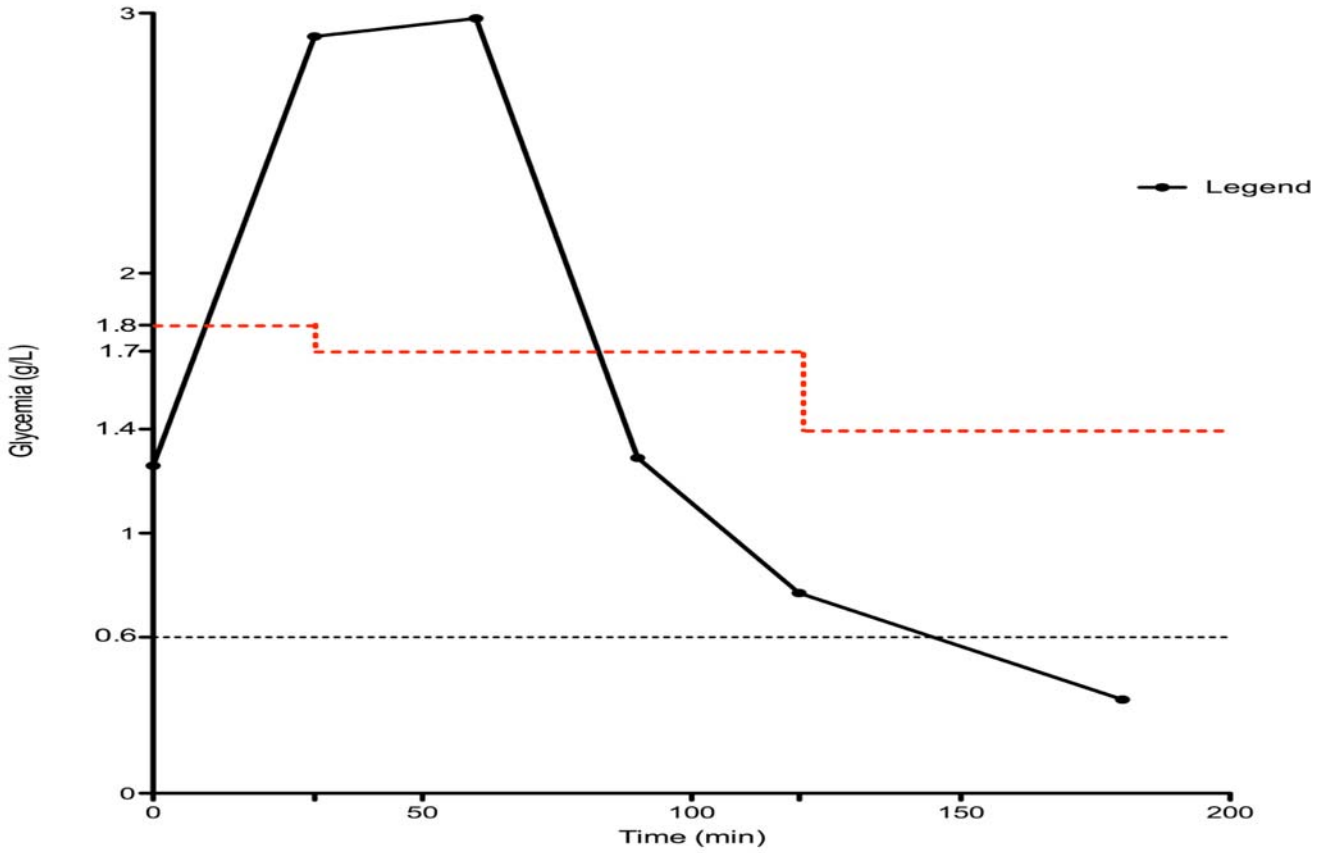
Results – Typical DS+ patient

B.C, 3 mths 5 days,

- Type C OA + laryngeal cleft,
- standard surgery, no difficulties,
- exclusive non continuous enteral nutrition,
- frequent abdominal pain, no other symptom



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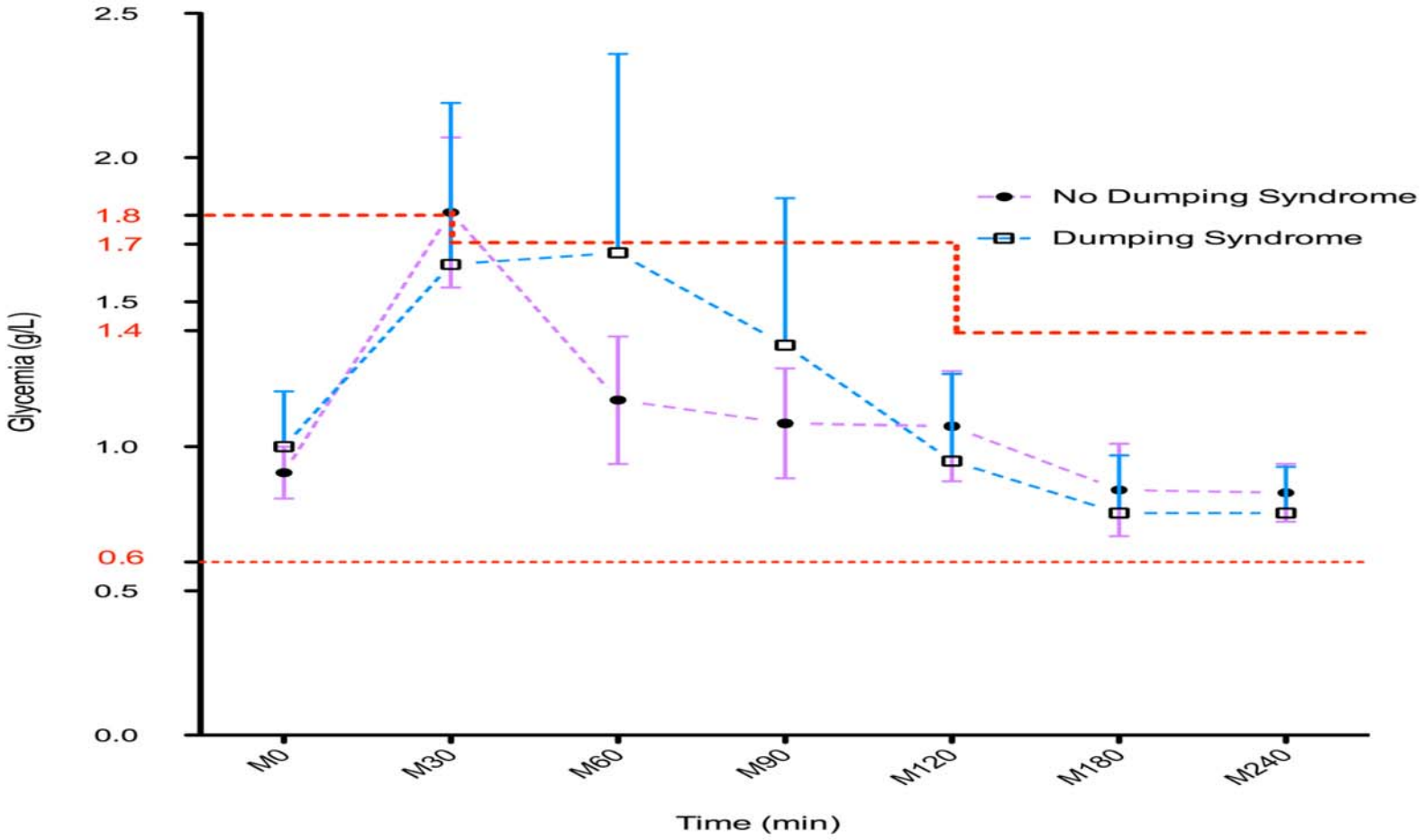
Results - OGTT



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Results - Symptoms

Symptoms	Number of symptomatic patients / 30 included (%)	Number of DS (positive OGTT / 27)
Frequent abdominal pain	11 (40.7)	4/10
Bloating	7 (25.9)	2/10
Diarrhoea	2 (7)	1/10
Agitation and sweat	1 (3.7)	1/10

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Discussion (1)

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- DS has been reported mainly after antireflux surgeries (familial dysautonomia, microgastry)
- **Scintigraphy in DS**: acceleration of gastric emptying for liquids, delayed gastric emptying for solids, loss of solid-liquid discrimination *(Jian R et al, Hepatogastroenterology, 1992)*
- **Malformation itself** (oesophago-gastric emptying troubles, reparation surgery itself (X nerve damage)

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Discussion (2)

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- Possibilities of treatment:
  - Nutritional measures (frequent small quantities, no liquid during meal, limitation of hyperosmolar aliments)
  - Uncooked cornstarch
  - Acarbose
  - Octreotide (sandostatin)

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Conclusion

- Ongoing study:
  - Up to 60 inclusions
  - Study of risk factors for DS
- Treatment: easy, cheap uncooked **cornstarch 0.5g/kg/meal**
- Specific follow-up for patients DS + (6 / 9 months of age)

Study of the outcome of patients with dumping syndrome needed

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Take home message

- DS is frequent in type C OA
- DS in OA is independent of antireflux surgery

- Asymptomatic **OR** aspecific symptoms = underdiagnosed

We suggest a systematic screening of infants operated for type C OA

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