

PERI OPERATIVE DIABETIC MANAGEMENT

Erni Esterhuizen

WHAT IS DIABETES

- Lack of, or diminished effectiveness of endogenous insulin
- Characterized by hyperglycaemia
- Multiorgan syndrome - involves large vessels, small vessels and nerves
- ↑ morbidity and mortality

DIAGNOSTIC CRITERIA

- Random B/G - > 11.1 mmol/l
- Fasting B/G - ≥ 7 mmol/l
- 2 hrs OGTT - ≥ 11.1 mmol/l
- Plasma HbA_{1c} - $> 7\%$

TYPES OF DIABETES

- Primary
 - IDDM (Type 1)
 - NIDDM (Type 2)
- Secondary
 - Specific pancreas path
(pancreatectomy,
drugs, pregnancy)
- Impaired glucose tolerance

PHYSIOLOGY

- ↑ Symp. Tone, glucagon, pituitary hormone levels and IL-1
- ↑ p.norepinephrine and epinephrine
- More susceptible to ↑glycaemia, hypovolaemia, osmotic diuresis, ketosis

MANAGEMENT

- Metabolic control
- Detect end stage pathology
- Maintain perioperative B/G control

METABOLIC CONTROL

- B/G - 6 - 10 mmol/l
- S/I - Urine, random B/G, HbA_{1c}, UAE, acid-base
- Diet
- Oral - Sulphonylurea, Biguanide
- Insulin - Short, intermed, long
- Carbohydrates

END STAGE PATHOLOGY

- Cardiovascular - IHD, CCF, HPT
> ECG
- Renal - micro vascular
- Neuropathy - Autonomic, peripheral
- Eye
- Stiff-joint Syndrome

MAINTANANCE OF B/G

- Poor control- delay elective surgery
- NIDDM - NPO, omit oral h/g 24 hrs pre-op, minor vs. major surgery
- IDDM - NPO, I VI (N saline), separate glucose/insulin and KCl solution, 2hrly hgt

CHILDREN

- Pre-op - Hct, UKE, HGT, urinalysis
- Pediatrician, Endocrinologist
- DKA
- Short surgery - nil
- Long surgery - NPO, Insulin/Glucose solution, correct K, 1-2hrly HGT