



Inpatients on CSII

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CLINICAL GUIDELINE:
Guidelines for managing
continuous subcutaneous insulin infusion
(CSII, or 'insulin pump') therapy
in hospitalised patients

Rules are for the
guidance of wise men and
the obedience of fools

Case 1- Orthopaedic Surgery

- T1D 1973
- DAFNE 2007
- Transient organic psychosis
- Hip/ femoral fracture 2015
- 2018 planned for removal of femoral nail
- Nov 2018 started CSII (omnipod)

- 16th Jan hip surgery
- 09 30 AM- Pump team
 - Spinal anaesthesia 80-100% TBR but adjust depending on blood glucose
- 11 30 AM- Anaesthetic and operative notes
- 18 30 PM- BG 9.3 some wound bleeding
- 19 30 PM- BG 9.8 back to ward
- 4 00 AM-
- 9 AM- em from patient BG 18.6, in pain
- 10 AM vomiting



- Vomiting
- Ketones > 7
- DKA
- What went wrong?

Case 2- Gallbladder Surgery

- 42 year old man, T1D 2002
- CSII 2009
- Self funded CGM
- June 2018 DANA RS / Fiasp/ G5
- Sept 2018 Cholecystitis
- Nov 2018 Plan for laparoscopic cholecystectomy
- Wants to stay on APS

This patient uses a closed loop artificial pancreas system to control blood glucose. He wears a glucose sensor in his arm which sends data to an Android device every five minutes. The device runs an algorithm that automatically adjusts insulin delivery on his insulin pump in response to changing levels. The Android device needs to be within a few metres of the patient at all times so that it can receive readings and control the pump. In the event of a problem the device can be switched off, at which point the pump will behave like any other insulin pump with pre-programmed settings. The device can be used to monitor the patient's blood glucose level during his stay in hospital. If you have any questions then please contact the diabetes team...

Case 3- Unwell and a bit ketotic

- 25 year old, T1D since aged 9
- Poor control since teens, recurrent DKA
- Retinopathy with laser 2016
- ED, postural hypotension, ? gastroparesis
- Trial of CSII (omnipod)- back to MDI
- Combo with 4 units tresiba

Case 3- Unwell and a bit ketotic

- Saturday Lunchtime out of hours call
 - Felt ill and sick
 - BG > 30: ketones 2.5 mM
- Sick day rules
- 5 PM vomiting
 - ketones 3, BG 25. told to come to ED

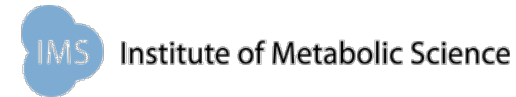
Case 3- Unwell and a bit ketotic

- ED
 - pH 7.36, ketones 0.9 mM, BG 16
 - BG > 30: ketones 2.5 mM lactate 3.7 mM
- Iv fluids
- Maintained on CSII
 - Admitted and follow his sick day rules



Case 4- Foot problems

- 80 year old man, T1D since
- CSII (omnipod) since (A1c 63%)
- Foot clinic
- Cellulitis



Case 4- Foot problems

- Apparent that unable to self manage pump
- Wife was managing
- Took off and MDI inpatient
- Restarted on discharge



Case 5- Gastroparesis

- 40 year old woman, T1D since
- CSII- Veo with LGS
- Gastroparesis- multiple admissions
- Gastric pacemaker
- Awful venous access



Case 5- Gastroparesis

- Maintained on CSII if not acidotic
 - Regular ketone checks
- IV fluids

- “Can we do this at home?”
- Rectal fluids