

ADULT DIABETIC KETOACIDOSIS (DKA) – MONITORING CHART

Surname _____ Reg no _____
 Forename _____ Sex _____ Date of birth _____
 Address _____ Cons _____ Ward/Dept _____ Hosp _____

TREATMENT AIMS:
 1. Blood ketones to fall by at least 0.5mmol/L/hour
 2. Venous bicarbonate to rise by at least 3mmol/L/hour
 3. Blood glucose to fall by at least 3mmol/L/hour
IF THIS IS NOT BEING ACHIEVED, CHECK LINES, THEN INCREASE RATE OF INSULIN BY 1-2mL/hour

MONITORING HOURLY CBG, CAPILLARY KETONES, Urinary Output
 pH – 2, 4, 6, 12, 18, 24 HOURS (or until resolved)
 U+E5 – 4, 6, 12, 24 HOURS
 EWS – hourly
RESOLUTION OF DKA: Blood ketones<0.3/L AND/OR pH>7.3

Hours from start of treatment (h)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Actual Time																										
Capillary Blood Glucose (mmol/L)																										
Start 10% Glucose at 100ml/hour when CBG<14																										
Blood ketones (mmol/L)																										
Insulin rate (mL/h)																										
0.9% NaCl (mL/h)																										
10% Glucose rate (mL/h)																										
Urine output (mL/h)																										
Venous pH																										
Venous K ⁺																										
Venous HCO ₃ ⁻																										

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ADULT DIABETIC KETOACIDOSIS (DKA) – MANAGEMENT CHART

Surname _____ Reg no _____
 Forename _____ Sex _____ Date of birth _____
 Address _____ Cons _____ Ward/Dept _____ Hosp _____

DATE: _____ TIME: _____ CONS: _____
 CLERKING DR: _____ GRADE: _____ BLEEP: _____

IMMEDIATE MANAGEMENT 0-60 MINUTES

ACTION 1	ALL 3 OF THE FOLLOWING MUST BE PRESENT TO CONFIRM DKA	CBG	mmol/L
CONFIRM DIAGNOSIS	1. Capillary blood glucose (CBG) 11.0mmol/L or known diabetes	Ketones	mmol/L
	2. Capillary blood ketones>3.0mmol/L or 2+ ketonuria	pH	
	3. Venous pH<7.3 and/or venous bicarbonate<15mmol/L	HCO ₃ ⁻	mmol/L

ACTION 2	Na ⁺	K ⁺	Urea	Creatinine	Chloride	eGFR	HCO ₃ ⁻	Lactate	Lab glucose	GCS	EWS
BASELINE ASSESSMENT										E	
										M	
										V	

ACTION 3	ECG	CXR	MSU	βHCG	STOOL MC&S	BLOOD CULTURES	CT HEAD	VTE PROPHYLAXIS GIVEN?
INVESTIGATIONS	CHECK ANION GAP							

ACTION 4	INFECTION/SEPSIS	STRESS	NON-COMPLIANCE	IDIOPATHIC	OTHERS (STEROIDS, ALCOHOL, PREGNANCY, PUMP FAILURE)
PRECIPITATING FACTORS					

ACTION 5	Patient shocked (SBP<90 mmHg) or severe DKA*	SpR/Consultant informed? Time:
IS THE PATIENT SHOCKED?	YES <input type="checkbox"/> Give 500ml 0.9% Sodium Chloride (NaCl) over 15 mins and give another 500ml bolus over 15mins if SBP still<100mmHg (Hypotension is likely to be due to low circulating volume but consider other causes such as sepsis/heart failure etc.) NO <input type="checkbox"/> Give 1L 0.9% Sodium Chloride over an hour	Severe DKA* Ketones>6, pH<7.1, HCO ₃ ⁻ <5, K ⁺ <3.5, GCS<12, SpO ₂ <92% SBP<90, Pulse>100/<60 CALL ITU

ACTION 6	Prescribe 50 units of Actrapid in 49.5ml 0.9%NaCl (1unit/ml) Commence a fixed rate insulin infusion at 0.1unit/kg/hour Maximum 15ml/hour (starting dose)	Done?	Initial	Time
INSULIN	Weight: _____ kg Initial Insulin rate: _____ ml(units)/hour If patient takes long acting insulin e.g. Insuman Basal or Humulin I or Glargine or Levemir or Degludec or Toujeo continue as normal (circle which applies)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Dose:		Units	

ACTION 7	Venous potassium level	Potassium Chloride (KCl) replacement	Life threatening hypokalemia can occur with insulin infusion.
POTASSIUM REPLACEMENT	>5.5mmol/L 3.5-5.5 mmol/L <3.5 mmol/L	NONE 40mmol/L SENIOR ADVICE, additional K ⁺ required	<input type="checkbox"/> If K ⁺ infusion is greater than 20mmol/hour cardiac monitoring is needed DO NOT GIVE KCl IF ANURIC

ACTION 8	Poor urine output (<0.5ml/kg/hour)	Persistent vomiting or reduced GCS	SpO ₂ <94% On Air	Persistent acidosis?	GCS<13	Senior review?
REASSESS PATIENT	Catheterise	Consider NGT	ABG/CXR	Consider other causes	Consider CT head	Name _____ Time _____

