PROBLEM SOLVING QUESTIONS

PROBLEM 1 A PATIENT WITH TYPE 2 DIABETES WHO PRESENTS WITH CONGESTIVE CARDIAC FAILURE

Question 51

A 61-year-old woman with type 2 diabetes presents to her GP with two months progressive fatigue, effort dyspnoea and ankle swelling. She is obese and has been controlled with diet alone since diabetes was diagnosed at age 58. Her BP is 142/92 and there are signs of congestive cardiac failure. An echocardiogram confirms poor left ventricular function with a large area of anterior hypokinesia. Fasting blood glucose is 10.2 mmol/L and HbA_{1c} 9.2 per cent, total cholesterol 4.8 mmol/L, HDL 0.9 mmol/L and triglyceride 1.2 mmol/L; creatinine is 92 μmol/L, serum electrolytes are normal. Management would appropriately include:

A Referral for cardiac catheterization
B Clopidogrel
C Ramipril
D Furosemide
E Rosiglitazone

Question 52

Initially she improves on treatment with metformin, simvastatin, valsartan and aspirin but two weeks later she is brought to hospital, severely ill. She is pale and shocked with a systolic BP of 76, an ECG shows Q waves in I, AVL, V1–3 and non-specific T wave changes. Urinalysis shows 1^+ ketones, 3^+ glucose, arterial blood gas (ABG) shows a pH of 6.9, oxygen saturation is 94 per cent breathing air, her temperature is 37°C, haemoglobin 12.0, white cell count 9000 with a normal differential, C reactive protein (CRP) <5, creatine kinase (CK) $=$ 450 u/L (normal range 24–170), glucose 18.6 mmol/L. Plausible differential diagnoses include:

A Acute gastrointestinal blood loss
B Diabetic ketoacidosis
C Lactic acidosis
D Non-ST elevation myocardial infarction (NSTEMI)
E Acute rhabdomyolysis

Question 53

Management on the ITU would appropriately include:

A Discontinuation of metformin
B Intravenous infusion of adrenaline
C Hyperbaric O_2
D Intravenous insulin
E Intravenous pantoprazole