

Do not forget to ask the last meal time

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To the Editor:

Hypoglycemia in adults is defined as blood sugar levels less than 55 mg/dl [1]. Below this level the sympathetic system is activated, releasing adrenaline and causing tachycardia and sweating (autonomic response) [2]. This may progress to confusion, convulsions, and coma (neuroglycopenia) if blood sugar falls below 40 mg/dl. Most of these signs may be masked under anesthesia.

We report a case of a 40-year-old, 45 kg, women with fibroid polyp, scheduled for total abdominal hysterectomy and bilateral salpingo-oophorectomy. Three months previously, she had severe anemia and hepatosplenomegaly. After transfusing 4 units of packed cells, her hemoglobin improved from 3 to 8 g/dl. Her preoperative investigations were: hemoglobin 8.2 g/dl, WBC 1,500/mm³, platelet count 92,000/mm³, and reticulocyte count 7%. Her renal and liver function tests were normal. CT abdomen revealed a large cyst in the liver. She was diagnosed as a case of hydatid cyst of liver with tropical splenomegaly.

In the operation theater, monitoring of SpO₂, noninvasive blood pressure, and ECG was started and a 16 G I.V. cannula was secured. Anesthesia was induced with 90 µg fentanyl citrate and 250 mg thiopentone sodium. Intubation was facilitated using vecuronium bromide. Anesthesia was maintained with isoflurane/nitrous oxide 67%/oxygen 33%. Intraoperative period was uneventful. Blood loss was 300 ml. One liter Ringer's lactate and one unit of packed cells were administered intravenously. After reversal with

neostigmine and glycopyrrolate, she was extubated and moved to the recovery room.

Three hours later, she had profuse sweating and became unresponsive to commands. Her vitals were: pulse rate 96/min, blood pressure 120/80 mmHg, SpO₂ 95% (room air) and 99% (60% FiO₂). She had convulsions, which were managed with midazolam 2 mg I.V. After 5 min, she had another episode of convulsions, which subsided with diazepam 10 mg I.V. Suspecting hypoglycemia, blood sugar was measured, which was 42 mg/dl. After administering 100 ml of 25% dextrose I.V., the blood sugar increased to 106 mg/dl. The convulsions subsided and she became conscious, oriented, and responsive to commands.

Whipple's triad [3] is pathognomonic of hypoglycemia. It consists of (1) symptoms known to be caused by hypoglycemia, (2) low blood sugar at the time of symptoms, and (3) reversal/improvement of symptoms when blood sugar is restored to normal. This patient had all these features and was diagnosed as having hypoglycemia. Hypoglycemia is treated with dextrose 2 ml/kg (infants 10%, children 25% and adults 50%) I.V. or 1–2 mg glucagon I.M.

This patient had taken her last meal 18 h preoperatively (she had missed her dinner), despite having been given nil per oral instructions for 8 h. In the fasting state a healthy adult usually maintains a blood sugar level above 50 mg/dl by glycogenolysis (8–10 h) and gluconeogenesis (24–36 h). But, this patient had profound hypoglycemia after 26 h of fasting, manifesting as convulsions, which stopped only after administering 25% dextrose. Hepatomegaly might have reduced the available glycogen stores and the substrates for gluconeogenesis.

This signifies the importance of confirming the time of last meal preoperatively for every patient. It is probably prudent to include dextrose in the intravenous fluids administered intraoperatively.

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