

Ketoacidosis can be alcohol in origin: A case report

ABSTRACT

Background: Alcoholic ketoacidosis (AKA) is a common reversible biochemical pathology arising from hyperketonaemia in patients with a history of chronic alcohol consumption. It is typically fatal when there is a delay in early recognition and management. A further complicating factor is that this condition is frequently confused with diabetic ketoacidosis (DKA). Case presentation: This report presents the case study of an elderly Chinese man with a 40-year history of alcohol consumption. The patient presented with acute shortness of breath, generalised abdominal pain, and vomiting. Blood gas analysis indicated severe high anion gap metabolic acidosis (HAGMA) with elevated serum ketones and modest hyperglycaemia which was initially treated as diabetic ketoacidosis (DKA). A diagnosis of AKA was later made after obtaining a thorough history of his binge drinking. The patient subsequently responded well to thiamine and aggressive fluid resuscitation. This case highlights the importance of a well-documented patient history and in-depth knowledge of ketoacidosis. Discussion: AKA must be suspected in patients with a history of chronic alcohol consumption and dependence. The symptoms are non-specific such as abdominal pain, nausea, vomiting and diarrhoea. The latter two result in malnutrition and starvation subsequently leading to hyperketonaemia, hypovolaemia and HAGMA. AKA should be clearly differentiated from DKA to prevent mismanagement. The mainstay of management of AKA is thiamine, fluid resuscitation and good sugar control to prevent Wernicke's encephalopathy. Conclusion: A precise patient's medical history is crucial to prevent misdiagnosis. A non-diabetic patient with a history of chronic alcohol consumption who presents with severe HAGMA, hyperketonaemia and dysglycaemia should raise a clinical suspicion of AKA. Thiamine and judicious fluid resuscitation as well as electrolytes and malnutrition correction should be promptly initiated in patients with AKA. Good family, social support and rehabilitation programs are crucial to help patients with alcohol abuse.