Heart Block in Severe Acidosis

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Introduction

A 49-years old female with past medical history of hypertension, end stage renal disease on peritoneal dialysis and congestive heart failure was admitted to the medical intensive care unit for septic shock from peritonitis and severe acidosis. She was hemodynamically unstable requiring a vasopressor support to maintain the mean arterial pressure. Arterial blood gas revealed a pH of 6.98, pCO₂ of 16 mm Hg, pO₂ of 114 mm Hg and bicarbonate of 3 mmol/L. Electrocardiogram (EKG) was obtained which revealed a complete heart block (Figure 1) as compared to the previous EKG (Figure 2). The rationale behind the EKG change is that acidic environment alters the function of the Atrio Ventricular (AV) node by slowing the conduction and prolonging the refractory period leading to complete AV conduction block.

Keywords: Celiac artery; Lesion; Retro peritoneum

Figure 1: Electrocardiogram (EKG) was obtained which revealed a complete heart block.

Figure 2: Electrocardiogram (EKG) was obtained which revealed a complete heart block as compared to the Figure1.

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