Hyperkalaemia is the most common electrolyte disorder associated with potentially life-threatening arrhythmias and cardiopulmonary arrest. It is defined as a serum potassium concentration above 5.0 mmol/l and may be classified as mild (K 5.0-5.9 mmol/l), moderate (K 6.0-6.4 mmol/l) or severe (K=6.5 mmol/l). A potassium concentration above 10.0 mmol/l is usually fatal unless emergency treatment is readily instituted, however survival with extreme hyperkalaemia (K 14 mmol/l) has been reported.

- Patients may present with weakness progressing to fascicul paralysis, paraesthesia, depressed deep tendon reflexes or respiratory difficulties. However, the absence of these symptoms should not lead to a false sense of security if the clinical history suggests a high risk of an electrolyte disturbance.

- Hyperkalaemia is often presented as the natural transition from a sine-wave pattern in the presence of extreme hyperkalaemia (K > 8.0 mmol/l). Analogous to resuscitation for hypothermia, it is important to recognise that defibrillation is frequently unsuccessful until the serum potassium is controlled and CPR should be prolonged.

- Pseudohyperkalaemia, also known as spurious hyperkalaemia, is defined as a difference between serum and plasma potassium greater than 0.4 mmol/l.

- It should be suspected in patients with hyperviscosity syndromes such as polycythaemia rubra vera, in the absence of ECG changes despite severe hyperkalaemia and when sample storage has been prolonged or inadequate.

- Pseudohyperkalaemia may occur due to malposition of the arterial cannula resulting in a high shear rate and haemolysis.