Physiology of the heart

This in-depth review of cardiac physiology will highlight important concepts to better understand cardiac function and pathologies. Core concepts such as pressure/volume loops, Wiggers diagram, Frank-Starling law of the heart, etc will be reviewed. Clinical correlates will be made wherever applicable.

Management of heart failure patient

This lecture will be a step-by-step, practical approach to the care of patients with heart failure. Left sided congestive heart failure will be discussed first. Emergency room treatments and diagnostics prioritization will be reviewed. Important therapeutic interventions will be discussed and guidelines for the management of complex refractory cases will be presented. Management of patients with systolic dysfunction will be examined.

External pacing: practical approach

Severe bradyarrhythmias refractory to medical interventions can prove to be a serious challenge and emergency clinicians should be prepared to implement external pacing. This intervention is simple and performed properly is key to stabilize patients in need. This lecture will be a step-by-step presentation of indications, implementation, and management of external pacing until definitive therapy can be attempted.

ECG interpretation: step-by-step analysis

ECG recordings are very often performed in the emergency room. It is important for the care team to be familiar with interpretation of ECG readings in order to promptly diagnose and treat patients with brady- or tachyarrhythmias. A rigorous and consistent evaluation of ECG recordings is key for a successful diagnosis. This lecture will review the step-by-step approach to interpret ECG readings.

Vasopressor and inotropes: clinical practices

While the treatment of patients in hypovolemic or distributive shock relies heavily on fluid administration some remain under-resuscitated despite adequate fluid administration. Conversely, patients with systolic dysfunction may not require fluid administration at all. In such patients, the use of vasopressors and inotropes should be considered. This talk will review current drugs available including novel vasopressors. Indications and drug dosing will be discussed.