



Case History No 4



Charite Hospital, Berlin, 23rd May 2006

Haemodynamic Monitoring of an ITU Patient with Sepsis Oesophageal Doppler Monitoring

A 31-year-old patient had been transferred to the Intensive Care Unit from another hospital. The initial diagnosis was sepsis secondary to pneumonia and Adult Respiratory Distress Syndrome. This patient was highly oedematous and was being treated by haemofiltration therapy.

The attending clinician, who had never used the CardioQ Oesophageal Doppler Monitor before, inserted a DP 240 oesophageal Doppler probe orally and quickly located the descending aortic waveform. The total time for probe insertion and signal acquisition was approximately 1 minute.

Screenshot 1 was taken shortly after the probe was inserted, it should be noted that the velocity scale has been increased to 200 cm/s to accommodate the high PV (Peak Velocity) readings. The accepted 'normal' PV value for a 30-year-old would be in the region of 90 to 120 cm/s. A raised PV of 131 is consistent with a mildly hyperdynamic state as seen with sepsis.

The FTc (Flow Time Corrected) of 315 ms is below the accepted 'normal' value of 330 – 360 ms, this may be an indication of insufficient intravascular volume.

Comment

Sepsis is typically associated with a high peak velocity and tachycardia. Patients still often require fluid volume along side catecholamines and/or vasopressor. In this case the oedema was first being managed by haemofiltration prior to fluid administration.

Screenshot 1: Classic septic hyperdynamic circulation waveform

