

Comparison of VLS Tissue Sto2 to PAC Venous Svo2

Background:

This study compared tissue Sto2 as measured by T-Stat® to venous Svo2 as measured by Swan-Ganz (PAC) catheter at the Stanford University Medical Center, Palo Alto, CA¹

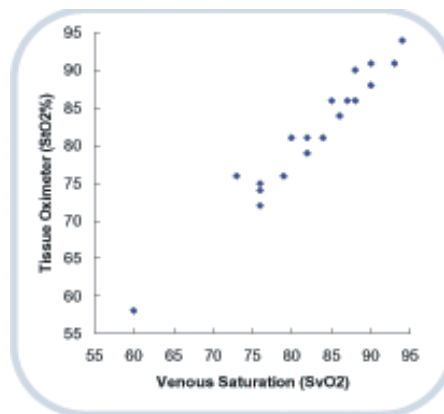
Methods:

Subjects undergoing cardiac surgery on cardiopulmonary bypass were monitored using noninvasive VLS monitoring,² sensitive to ischemia.³ Seven subjects were tested in 20 measurements total. All studies were done under IRB monitoring and approval guidelines.

Results:

Swan values were measured and compared to Sto2 values in 7 subjects, as shown below ($r^2=0.94$). Up time of the instrument was 98% during the entire procedure. There were no adverse events reported during this study related to the T-Stat® Sto2 measurements. There were no problems reported with the T-Stat® Sto2 device during this study.

Comparison of Swan-Ganz (PAC) Svo2 vs. T-Stat™ (VLS)



Conclusions:

T-Stat® oximetry appears to be correlated to measures of central venous oxygen ($r^2=0.94$). The relationship in of Svo2 to Sto2 in normoxia to hyperoxia appears to be linear. These results have been submitted to and reviewed by the FDA.

1. Data submitted to and reviewed by FDA.
2. Continuous, noninvasive, and localized microvascular tissue oximetry using visible light spectroscopy. *Anesthesiology*. 2004 Jun;100(6):1469-75.
3. T-Stat is indicated in infants (including neonates), children, or adults at risk for reduced-flow and no-flow ischemic states.