

Category : **Respiratory: other**

A289 - Concordance of oxygen extraction values, arteriovenous oxygen difference and shunt calculated from venous gases and spo2 compared with arteriovenous gases

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Introduction:

Calculation of perfusion and oxygenation indicators often includes the simultaneous measurement of arterial and venous gases in critically ill patients. This entails a large amount of supplies and inconvenience caused to patients who require frequent arterial blood sampling, a situation that is aggravated if there is no arterial line, as is the case in developing countries [1]. The Objective of this study To determine the degree of correlation and concordance of the gasimetric values of arteriovenous oxygen difference, oxygen extraction and intrapulmonary shunt calculated with venous gases and pulse oximetry compared with the calculations performed in arteriovenous gases

Methods:

100 hospitalized patients from intensive care units in Colombia was evaluated. Adult patients with medical or surgical pathologies were included. All patients underwent arterial and venous gasimetry upon admission and 6 hours later, and arterial and venous gas measurements were performed in all of them, together with the recording of pulse oximetry at the time of sample collection

Results:

Average age of 63.3 years, 65% was men, an average APACHE of 10.75 (95% CI: 9.3-12.1) and a SOFA of 5.2 (95% CI: 4.5-6.06). An excellent correlation was found between the values of arteriovenous oxygen difference and oxygen extraction measured with venous gases and pulse oximetry compared with arteriovenous gases ($p < 0.00001$). An excellent agreement was also found for the values in the case of the arteriovenous oxygen difference; and for oxygen extraction. In the case of the intrapulmonary shunt, a good correlation was also found between the two measurements with a good agreement ($p < 0.00001$)

Conclusion:

The calculation of the values of arteriovenous oxygen difference, oxygen extraction and intrapulmonary shunt can be performed from the venous blood gas only and the pulse oximetry taken at the same time without the need to take an arterial sample. This can reduce costs and inconvenience for critically ill patients [2]