Non-Invasive Monitoring Technology – Capnography

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What are some of the problems associated with the clinical usage of Capnography measurements?

Capnography is a technique used to monitor the concentration of carbon dioxide (CO2) in the respiratory gases excreted via the body by the respiratory system. This technique or its results are mostly represented in the form of a graph, plotted against time. Sometimes, the graph is also plotted against expired volume, which is more useful and result oriented method. The tool that is used for the measurement or monitoring of the concentration of the carbon dioxide is called the Capnogram and the graph used to represent the results are known as Capnograph (Al-Ali, 2015). The unit of measurement of this concentration is millimeters of mercury, or mmHg.

Capnography is mostly used in the intensive care units and while giving anesthesia to the patients. It is very beneficial in the diagnosis and the treatment of various respiratory diseases in the respiratory systems especially early respiratory depression and airway disorders (Suarez-Sipmann, Bohm, & Tusman, 2014). Where this technique is proving very much beneficial for in the medical field, it has also some issues while using it for various medical purposes. The first and foremost issue that if being used in the sedation, it sometimes gives varying information or values for the exhaled amount of Carbon Dioxide which may cause confusion for the medical practitioner.

In addition to this, the technology of Capnography can be a little confusing while providing the data for the concentration of Carbon Dioxide if plotted against various variables. For example, if the values are measured against time, they may vary from the values measured against any other factor like expired volume. The values obtained as a result of graph plotted against expired volume are considered much more valid and reliable as compared to the values obtained out of the graph plotted against time.

**References**

Al-Ali, A. (2015). *U.S. Patent Application No. 14/627,500*.

Suarez-Sipmann, F., Bohm, S. H., & Tusman, G. (2014). Volumetric capnography: the time has come. *Current opinion in critical care*, *20*(3), 333-339.