ICU
MANAGEMENT & PRACTICE

RCT shows that NAVA shortens time of mechanical ventilation by almost 35% for adult ICU patients

The clinical effectiveness of Getinge's patented Neurally Adjusted Ventilatory Assist (NAVA), which uses the patient's own respiratory drive to control ventilator assistance, is supported in the NAVIATOR trial. According to the NAVIATOR trial, NAVA significantly increased the number of ventilator-free days and shortened the time of mechanical ventilation (MV) for adult patients with acute respiratory failure (ARF)[1].

"This large multi-center independent trial supports that NAVA has significant positive clinical effects for adult patients in intensive care units (ICU). The study showed that through the use of NAVA, the days on mechanical ventilation could be reduced from 12 to 8 days, a four-day reduction or close to 35% which is quite a remarkable improvement with many positive consequences. Fewer days in the ICU also translates to a significantly improved health economy, enabling hospitals to free up precious ICU beds and resources" says Jens Viebke, President Acute Care Therapies at Getinge.

The NAVIATOR randomized, controlled trial (RCT), which was conducted in 14 centers located in Spain and one in China, included 306 patients with acute respiratory failure (ARF) from several etiologies, such as pneumonia, sepsis, COPD and post-surgical patients. Earlier this year, an increase in ventilator free-days was also reported in two single center randomized, controlled trials completed in China and UK.

One of the principal investigators Dr. Jesus Villar, at the Research Unit, Hospital Universitario Dr. Negrin, Las Palmas de Gran Canaria, Spain, concludes: "This is the first RCT that on a multicenter scale examined the effectiveness of NAVA in reducing the dependency on mechanical ventilation of patients with ARF with an expected duration of mechanical ventilation more than 72 hours. The results confirmed that NAVA is a ventilation mode for routine used in a heterogeneous population of patients with ARF, and can make the transition to spontaneous breathing in conjunction with gradual removal of sedative agents much quicker and easier."

Getinge is highlighting the groundbreaking technology of NAVA in a new video, which showcases Sabina Checketts, who was born 12 weeks too early with 50/50 chance at survival. Checketts is now a neonatal doctor, using new therapies and sophisticated technology to improve outcomes for premature babies.

Watch the mini-documentary about the NAVA technology, featuring Sabina Checketts.

This is NAVA

The NAVA and NIV NAVA ventilation modes are available i Getinge's Servo-u, Servo-n and Servo-i ventilator systems, and were designed to provide optimal patient-ventilator interaction for adult, pediatric and neonatal patients, invasively or non-invasively ventilated.

NAVA has been commercialized exclusively by Getinge since it was invented by Dr. Christer Sinderby in the mid-1990s and commercially released in 2007. Since then the technology has been further developed by Getinge, for example in terms of usability, performance and automation.

"This is one of the reasons why we have been outgrowing the market in this space for a while now. But we believe it has only started. We are far from fully penetrated when it comes to the potential end-users, so we will do all we can to ensure that NAVA is available to even more patients in the future", says Jens Viebke.

The ventilation mode is based on monitoring of the neural output generated by the respiratory centers in the brain. By using the same electrical signal that activates the human diaphragm, the ventilator is continuously fully synchronized and proportional with the patient´s own respiratory efforts...

“NAVA is designed to deliver what the patient wants,” Jens Viebke explains. “Since it is the patient’s own physiological respiratory drive that controls the tidal volume and respiratory pattern, it promotes both lung- and diaphragm spontaneous breathing and improves the patient´s overall ICU experience”

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7474954/pdf/134_2020_Article_6181.pdf

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