Press release

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Carina optimizes non-invasive ventilation

The new software 3.20 considers special requirements of patients and medical personnel

Lübeck - For the Carina ventilator a new software 3.20 is available. It provides more support for non-invasively ventilated patients and helps to reduce the therapy effort. Thanks to an extended alarm management Carina minimizes unnecessary alarms. Thus the equipment helps to support the success of the NIV (non-invasive ventilation) therapy.

Non-invasive ventilation is becoming increasingly established in clinics. In comparison to intubation it leads to less nosocomial infections and decreases the risk of complications. Nevertheless, how successfully the NIV-therapy is carried out, depends, among other things, on how well the ventilator is matched to the patient. “When the patient wishes to breathe spontaneously between the mandatory breaths, the ventilator must recognize and support the spontaneous breathing attempts. Otherwise the patient becomes very stressed and quickly exhausted which may interfere with the course of the therapy” as explained by Sandra Cordts, Dräger product manager. With software 3.20 Carina offers an activatable pressure support for the controlled ventilation modes PC-BIBAp and VC-SIMV for the first time. “Via this additional function the ventilator recognizes when the patient is able to breathe again and actively supports this. This is particularly useful during the weaning process to fully restore the spontaneous breathing of the patient at the end of mechanical ventilation”, as Cordts explains.

Patient cooperation as a success factor

The ventilator does not only react sensitively to spontaneous breathing of the patient. In addition, with the new AutoAdapt function Carina can help the patient to get used to breathing pressures slowly. “This helps to improve tolerance and cooperation of the patient. Patients who are awake often perceive the use of a mask with full breathing pressure as uncomfortable”, according to the Dräger employee. Thus, often the doctor or nurse initially sets

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a Pressure Control-Biphasic Positive Airway Pressure
b Pressure Control - Synchronized Intermittent Mandatory Ventilation
the pressure level on a low level, to gradually increase it during the ventilation process. Since this has so far been happening manually, a frequent back and forth to and from the ventilator has been unavoidable. AutoAdapt automatically completes this task after a configuration of the start settings and a selected adaption time between 5 and 120 minutes which may reduce the therapy effort. Through the new Auto wake-up function the patient may, even after a long interruption, start the equipment from stand-by mode with the first breath and continue with the ventilation therapy. The equipment does not have to be restarted manually for this.

Less alarm - less stress
Alarm functions are very important to make the patient and medical personnel aware of critical situations. The alarm management of the Carina Software 3.20 which has been specifically adapted to the NIV requirements can reduce warning signals to what is strictly medically necessary. The consideration behind this is that frequent false alarms do not only put an unnecessary burden on medical personnel, but may also worsen patient motivation for the therapy. During mask ventilation leakages may for example lead to false alarms. The SyncPlus-functionality of the Carina which continually compensates the varying leakages, supports in reducing additional alarms.

Manufacturer of the Carina is Dräger Medical GmbH.

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