Safety and simplicity for lung recruitment in the OR

Lung recruitment fact

5 – 10% of all surgical patients develop Post-operative Pulmonary Complications (PPCs). In thoracic or abdominal surgeries even up to 30–40% develop PPCs¹.

Visualize hemodynamic conditions

Fluid management fact

37% – 55% of postoperative complications can be prevented through perioperative goal directed fluid therapy²,⁶.

»A good ventilatory strategy involves a good hemodynamic strategy«

Carlos Ferrando MD, PhD, EDAIC. Dept of Anesthesiology, Clinic Hospital, University of Valencia, Spain
Lung protective ventilation helps

In a stepwise recruitment maneuver there will be less hemodynamic compromise.

Lung recruitment with Maquet FLOW-i allows you to choose between an automatic or manual maneuver. Whichever you choose, the recruitment will be stepwise.

FLOW-i measures and displays the dynamic compliance in real time, which is used to find the optimal lowest PEEP that keeps the lungs open.

FLOW-i® and ProAQT®

Did you know that atelectasis affects over 90% patients undergoing surgery?³

Anesthesia-induced lung collapse is a well-known entity which can be avoided by a good ventilatory strategy. FLOW-i's new lung recruitment maneuver aims to gently open the alveoli to make a lasting difference for your patients.

Close relationship between atelectasis and PPC²

Postoperative pulmonary complications

Hypoxemia  Pneumonia  Local inflammatory response  Ventilator induced lung injury

In the automatic recruitment maneuver, a stepwise increase in pressure is applied for a time period set by the user. It’s designed to reduce the occurrence of hemodynamic compromise. In combination with the ProAQT technology it is possible to detect any hemodynamic changes automatically, continuously and in real time – prior, during and after an recruitment maneuver.

Heart-lung interactions during the Recruitment Maneuver can be monitored by the ProAQT technology

90% Atelectasis

Start anesthesia

Effects on hemodynamics

Intrathoracic pressures

Venous return

LV Preload

SV

Lung recruitment performed to avoid atelectasis

ProAQT continuously monitors the parameters SVV, PPV, CO, HR, SV

Recruitment Maneuver (RM)

Prior

 optimize volume status (SVV, PPV)

During

 ΔCO + 15% adjust RM⁴

After

ΔSV ≥ 30% give fluid

Patient is preload responsive⁵

Avoids Hypoxemia

Advanced hemodynamic monitoring helps

Use of Advanced Patient Monitoring shows the response of your patient to lung recruitment.

The change of CO and SV is detected in real-time. Also Preload (SVV, PPV), Afterload (SVRI) and Contractility (dPmx, CPI) parameters provide clinicians better insights.

Occult hypovolemia can be detected prior to the recruitment maneuver followed by appropriate perioperative fluid management that will decrease post-surgical complications.

ProAQT Sensor and PulsioFlex Monitor

• Minimally invasive

• Easy to attach to arterial line

• Continuous trend monitoring
Hand in hand for better patient care
FLOW-i® and ProAQT®

Literature


This document is intended to provide information to an international audience outside of the US. The views, opinions and assertions stated by the physician are strictly those of the physician and their practice and do not necessarily reflect the views of Maquet Critical Care.

Manufacturer PulsioFlex & ProAQT · PULSION Medical Systems SE · Hans-Riedl-Str. 17 · 85622 Feldkirchen, Germany · +49 (0)89 459 914 0 · info@pulsion.com

Manufacturer FLOW-i · Maquet Critical Care AB · Röntgenvägen 2 · SE-171 54 Solna, Sweden · +46 (0)10 335 73 00

www.getinge.com