

How we ventilate: an educational and hands on course for a deeper understanding of the spontaneously breathing patient

Feb 18-19, 2027, Kantonspital Graubünden, Chur, Switzerland

Preliminary Program:

February 18th

First section: Drive and effort

Morning-Session: 9.30 -13:00

Introduction Lesson: *What is challenging in the spontaneously breathing patient.*

A

How we monitor and ventilate spontaneously breathing patients: Noninvasive tools

Clinical scenario 1: *What is normal? From simple to complex cases (approach to PMI, P 0.1, flow index, P occ; Internal guidelines)*

The expert: Noninvasive tools

- A- PMI and P 0.1, flow index- Pocc: pitfalls and strengths
- B- Setting Peep in reducing effort
- C- Pocc and its role in NIV

B

How we monitor and ventilate spontaneously breathing patients: Advanced tools

Clinical scenario 2: *Pathological noninvasive effort detectors: Any reason to worry? Escalation to more invasive tools such as esophageal pressure monitoring.. Practical examples and internal guidelines.*

The expert: Advanced tools

- *Esophageal pressure monitoring in spontaneously breathing: the physiology*
- *Keep it simple: Which parameters are the most important at the bedside*
- *Esophageal pressure monitoring in noninvasive ventilation*
- *Diaphragm protection: How to monitor*

Coffee-Break (15 minutes)

C

How we monitor and ventilate spontaneously breathing patients. Balancing effort to protect lung and diaphragm: Challenges

Clinical Scenario 3: *Examples: the story does not add up. What we do? Examples from real life*

The expert: challenges

- A- *What to do with high tidal volumes: is that important? role of DP. Who wins?*
- B- *Non invasive support after invasive ventilation? Role of high flow*
- C- *(EIT)*

Lunch-Break (1 hour)

Afternoon-Session: 14 -18.30

14-15:00: **Practical part of the first section:** *Clinical scenario (4 groups)*

Second section: Patient-ventilator asynchrony

15-18.30:

A

How we look at ventilator curves and how to monitor them in daily practice.

Clinical Scenario 1: Clinical case with major asynchrony

The expert: Clinical importance of recognizing asynchronies

Relevance of major (and minor) asynchronies. The importance of monitoring

B

How we look at ventilator curves and how to handle them in daily practice (do we?)

Clinical Scenario 2: Clinical case with major asynchrony

The expert: Clinical importance of treatment of asynchronies

- *Ineffective triggering*
- *Reverse triggering and Double triggering*
- *Autotriggering*

C

How we look at ventilator curves and how to handle them in daily practice (do we?)

Clinical Scenario 3: Pathologies that typically end with asynchrony patterns (COPD, from minor to major asynchrony?)

The expert: What does science tell us about importance of preventing asynchronies

- *Minor asynchronies*
- *Role in ICU sub-populations: COPD and ARDS*
- *Muscle weakness*

19:00 *Conclusions of Day 1*

19.30: *Dinner*

February 19th

Morning-Session: 8.30-12.30

8:30-9:30: ***Practical part of the second section: Clinical scenario (4 groups)***

Third section: Noninvasive respiratory support

9:30-13:00:

A

How we monitor and ventilate spontaneously breathing patients in noninvasive support: Balancing effort and protection.

Scenario 1: Clinical scenario in a high flow-dependent patient: When is intubation needed?

The expert: High-flow therapy; Basics and differences by pathology of the patient.

Coffee-Break (15 minutes)

The expert: NIV; Indications in hypoxic failure and COPD.

Fourth section: Deeper insight in two common pathologies

A

How we monitor and ventilate the spontaneously breathing restrictive patient

Clinical scenario: The spontaneously breathing (post-)ARDS-patient

The expert: The restrictive patient.

- *Transition from controlled to spont: over and underassistance (repetition of noninvasive tools)*
- *The importance of PEEP. Application of EIT?*
- *Pressure support titration and pendelluft phenomenon*
- *Recruitment in Spont (SIGH)*

Lunch-Break (1 hour)

Afternoon-Session: 14-16:30

B

How we monitor and manage occult work in the obstructive patient.

Scenario 2: COPD-patients: Auto-Peep measure, expiratory time constant, internal guidelines

The expert: The COPD patient.

- *Overview: Pathophysiology of COPD and Asthma when ventilated: Scientific background.*
- *How to set the ventilator*
- *Differences between asthma and COPD: peep trial (flow limitation and flow obstruction)*
- *Pitfalls of P 0.1, PMI and Pocc*

Practical part on the third and fourth section: 4 groups doing the same (scenarios

16:00- 16.30: Conclusions of Day 2