# PROTHOR Newsletter 1/2018

**Dresden, January 17, 2018**

Dear National Coordinators and Local Investigators of PROTHOR,

The PROTHOR study is running for 1 year now, and I want to give you a short overview on the general progress. We have 20 centers actively working on the study (and the number of centers is still increasing), we have 84 patients successfully included in the study (effective 17.01.2018). Meanwhile, we have created three training videos to get used to the database. You can find them here:

https://youtu.be/XzrkS63MSiM

https://youtu.be/NWKC9OF39MA

https://youtu.be/WOyRNh04BxM

Our experiences of the last year have shown, that the study design is straight forward and that the study fits seamlessly into daily practice. We have an overall low number of adverse events.

If you encounter a severe adverse event, please report to Ary Serpa Neto, he is the SAE manager of the study. Please use the attached form.

The website of the study can also be reached from this address: www.prothor.info

Today (17.1.18) small changes to the database have been applied (Antibiotics and PONV are recorded on postoperative day 2-5+discharge).

If you are planning to attend this year's ESA Congress in Copenhagen, please note, that there will be a PROTHOR meeting on Saturday June 2. The specific time has not yet been fixed. I will keep you informed.

On the official PROTHOR website, frequently asked questions are answered, please have a look: http://prothor.info/doku.php?id=200:FAQ

One topic has been asked very often; therefore we show it in this newsletter:

**Question:** The re-expansion of the non-ventilated lung at the end of the surgery, how should it be performed? In the high PEEP group, do I have to perform two recruitment maneuvers (one during OLV, a second with TLV) ?

**Answer:** Let's make an example for the high PEEP group. The Patient is in lateral position, the surgery is ongoing.. Every one hour during OLV you should perform a recruitment maneuver (please record the recruitment data). At the end of OLV, the surgeon will ask you to re-expand the lung. Now you should re-expand the lung with a CPAP valve (to control the pressure and to obtain standardization among centers. If you don't have a CPAP valve, consider connection of a second ventilator that is able to perform CPAP to the non-ventilated lung)

1. 1. Keep the non-ventilated lung under visual inspection
2. 2. Connect the CPAP device with adequate oxygen flow /FIO2 1.0) to the non-ventilated lung
3. 3. Set CPAP to 10 cmH2O during 20 seconds
4. 4. Set CPAP to 15 cmH2O during 20 seconds
5. 5. Set CPAP to 20 cmH2O during 20 seconds

Now the lung is expanded. You don't have to record this "recruitment" data of lung re-expansion. As soon as you have reestablished two lung ventilation (typically in lateral position) please perform a recruitment maneuver and record the data (in the database the time point is now called "after lung re-expansion, TLV"). After surgery, the patient should be repositioned in supine position. Please perform the recruitment maneuver (timepoint: "at end of surgery (supine)"). Then the patient can be extubated.

For the low PEEP group there are no recruitment maneuvers. For re-expansion of the non-ventilated lung, please perform the CPAP maneuver as described (CPAP valve or second ventilator, stepwise increase of continuous airway pressure up to 20 cmH2O).

The intraoperative CRF has been modified for better understanding:

## 11 intraoperative variables: Documentation of Recruitment maneuver

Document routine measurements first, take blood gas probe, perform the recruitment maneuver. Record values when reach

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Indication for RM(tick one) | | | | | | | |
| ROUTINE | RESCUE | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | bronchoscopy/disconnection | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | after begin of OLV | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | every one hour during OLV | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | after lung re-expansion, TLV | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | at end of surgery(supine) | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | TLV/OLV | | e.g. TVL | | | | | |
| | Time [hh:mm] | e.g. 14:15 | | | | | | |
| | Ppeak [cmH2O] | | e.g. 30 | | | | | |
| | Pplat [cmH2O] | | e.g. 28 | | | | | |
| | PEEP [cmH2O] | | e.g. 10 | | | | | |

## 10 Intraoperative variables: documentation of routine measurements

Record variables within 10 min after anesthesia induction, 5 minutes before OLV, hourly thereafter, at end of su
In case of several changing episodes of TLV and OLV record first episode of OLV after start of surgery and last ep
Document routine measurements first, take blood gas probe, perform the recruitment maneuver.

| | Induction | Patient in final surgical position with TLV | 10 min after OLV | 1 hour after OLV | 2 hour after OLV | 3 hour after OLV | |
|---|---|---|---|---|---|---|---|
| Time [hh:mm] | | | | | | | |
| TLV/OLV | | | | | | | |
| Ppeak [cmH2O] | | | | | | | |
| Pplat [cmH2O] | | | | | | | |
| PEEP [cmH2O] | | | | | | | |

| ..continued | Induction | after start of surgery, prior to OLV | 10 min after OLV | 1 hour after OLV | 2 hour after OLV | 3 hour after OLV | 4 hour after OLV | 5 hour after OLV | 6 hour after OLV |
|---|---|---|---|---|---|---|---|---|---|
| New hypotension | if sudden BPsys drop > 20% or equivalent increase of catecholamine dose (if this event occurs between two time points, please record with the later time point) | | | | | | | | |
| | yes/no | yes/no | yes/no | yes/no | yes/no | yes/no | yes/no | yes/no | yes/no |
| New bradycardia | if sudden HR drop > 20% (if this event occurs between two time points, please record with the later time point) | | | | | | | | |
| | yes/no | yes/no | yes/no | yes/no | yes/no | yes/no | yes/no | yes/no | yes/no |
| New hypoxemia | $SpO_2$ < 90% for > 1 minute (if this event occurs between two time points, please record with the later time point) | | | | | | | | |
| | yes/no | yes/no | yes/no | yes/no | yes/no | yes/no | yes/no | yes/no | yes/no |
| Disconnection from the ventilator | Disconnection of the ventilated lung or bronchoscopy (if this event occurs between two time points, please record with the later time point) | | | | | | | | |

I hope these changes will facilitate your work. If you have any questions, please contact me (thomas.kiss@uniklinikum-dresden.de).

Best regards,

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