Campus für Intensiv- und Notfallmedizin e.V.

COVID + ARDS

Respirator settings in a nutshell

ventilation targets

tidal volume	driving pressure (inspP – PEEP)	plateau pressure	FiO_2	PEEP
6 ml/kg PBW	≤ 15 cmH2O	≤ 30 cmH2O	≤ 0.6	aim high

height in cm		150	155	160	165	170	175	180	185	190	195
men	tidal volume (ml)	290	315	340	370	400	420	450	480	505	530
women	tidal volume (ml)	260	290	315	340	370	400	420	450	480	505

lower PEEP – higher FiO_2														
	FiO_2	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0
	PEEP (cmH2O)	5	5	8	8	10	10	10	12	14	14	14	16	18	18 – 24

higher PEEP – lower FiO_2														
	FiO_2	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5 – 0.8	0.8	0.9	1.0	1.0
	PEEP (cmH2O)	5	8	10	12	14	14	16	16	18	20	22	22	24

clinical practice:
compromised haemodynamics: go for lower PEEP!
obesity: go for higher PEEP and titrate according to compliance!

Decrease FiO_2 first, then decrease PEEP!

ABG targets

PaO_2	SaO_2	$PaCO_2$	pH
60–80 mmHg	90–94 %	≤ 70 mmHg	≥ 7.2

refractory hypoxia

PaO2 / FiO2 ratio ≤ 150 mmHg
despite adequate PEEP and exclusion of other disorders → **prone positioning**

180° better than 135°

16 hours prone
4 hours break

expect several proning cycles

prone positioning until:
PaO2 / FiO2 ratio in prone = in supine
+ FiO_2 < 0.6

PaO2 / FiO2 ratio < 80 mmHg despite proning: consider ECMO

refractory hypercapnia

- ✔ increase respiratory rate
- ✔ decrease dead space
- ✔ ECMO?

other considerations

- no common paralysis
- no prophylactic antibiotics
- no common therapy with steroids
- no inverse ratio ventilation

! strive for negative fluid balance !

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