

NICU JET First Intention and Management Guidelines



First intention Jet Ventilation as primary lung protective ventilation measure for extremely low birth infants born less than 27 weeks birth GA and/or BW 800 grams

| | Initiation | When to Increase | When to Decrease | Weaning Prior to Extubation |
|--|--|---|---|------------------------------------|
| HFJV PIP | 22-24cm H2O | Hypercarbia | Hypocarbia | Decrease PIP to 20 cm H2O |
| <p>To change PaCO₂ ± 2 - 4 mm Hg adjust PIP by 2 cm H2O To change PaCO₂ ± 5 - 9 mm Hg adjust PIP by 4 cm H2O Look for change in servo pressure of around 33% for adequate response to PIP change</p> | | | | |
| HFJV rate | 300 (<24w with RDS) 360 (24-26w with RDS) | Persistent hypercarbia despite high PIP and no PIE/air leak | PIE/Air leak Weaning vent/auto PEEP | Decrease to 240 |
| CMV rate (Sigh breaths) | No prophylactic sigh breaths For reversing atelectasis: Start at 3/4 with i-time 0.4 | Persistent atelectasis, | Airleak/PIE/ auto PEEP | Decrease to 0 |
| CMV PIP | 6-10 above PEEP for atelectasis | not >10 above PEEP | Airleak/PIE | Decrease to 6 above PEEP |
| PEEP (on CMV) | 5 cm H2O | Improve oxygenation | Lung hyperinflation, Hemodynamic compromise | Decrease to 7 cm H2O |
| Inspiratory time | 0.02 seconds | Do not adjust | Do not adjust | Do not adjust |

References:

1. Watkins PL, Dagle JM, Bell EF, Colaizy TT. Outcomes at 18 to 22 Months of Corrected Age for Infants Born at 22 to 25 Weeks of Gestation in a Center Practicing Active Management. *J Pediatr* 2020;217:52-8
2. Clinical resources, Bunnell Jet ventilation. www.bunl.com
3. Muniraman H, Biniwale M, Rangasamy R. Invasive Ventilation in Newborns. Chapter 25. The handbook of Neonatology. Second edition. Indian Journal of Pediatrics. New Delhi. 2020
4. <https://uichildrens.org/health-library/management-strategies-high-frequency-jet-ventilation-neonates>

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