Assessing Mechanical Ventilation Asynchrony through Iterative Airway Pressure Reconstruction

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Highlights

- Mechanical Ventilation can be guided through the use of model-based method.
- Application of model-based method is limited during mechanical ventilation asynchrony.
- Respiratory mechanics estimation is less reliable during asynchrony.
- Asynchrony is not monitored in real time and there is a need to overcoming this problem.
- Iterative pressure reconstruction method is presented to monitor and reconstruct asynchronous airway pressure.
- Reconstructed airway pressure is free from 'asynchrony' and enables more consistent respiratory mechanics estimation.
- Iterative Pressure Reconstruction also provide unique metric to quantify the magnitude of asynchrony of a breathing cycle.