

Anesthesia induction is related to the change of cardio-autonomic control. The coordination between cardiovascular and respiratory system behaviors could represent autonomic nervous system functionality. We conducted a short time Fourier transform coherence to explore the linearity between heart rhythm and respiration at different frequency bands during anesthesia induction. Total 32 eligible subjects were enrolled. During induction, the subjects demonstrated significant reduction of high frequency coherence (coh-HF) with simultaneously significant increases of low frequency coherence (coh-LF) and very low frequency coherence (coh-vLF) as compared with pre-induction period. Besides, the subjects had decrease of linearity at high frequency band (coh-HF>0.5) and increase of linearity at low frequency (coh-LF>0.5) and very low frequency (coh-vLF>0.5) bands as compared with pre-induction period.