**Supplementary Fig 1.** Oxygenation, respiratory parameters and the pain assessment score\* after randomization to NIV NAVA and CPAP groups.

- a.) Similar FiO<sub>2</sub> was required to reach the aimed SpO<sub>2</sub> levels in both treatment groups.
- b.) Breathing frequency did not differ between the groups.
- c.) CPAP pressure was equal to PEEP in NIV NAVA patients. Peak inspiratory pressure during NIV NAVA follows the Edi-signal, and was variable from time to time.
- d.) Similar NIAPAS scores were observed in both groups.

<sup>\*</sup>In the present study, the NIAPAS score was used for assessment of pain and discomfort [6].

