



Heart rate variability analysis as an index of emotion regulation processes: Interest of the Analgesia Nociception Index (ANI)

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Résumé en anglais	Autonomic Nervous System (ANS) variations are strongly influence by emotion regulation processes. Indeed, emotional stimuli are at the origin of an activation of the ANS and the way an individual pass from a state of alert in the case of emotional situation to a state of calm is closely coupled with the ANS flexibility. We have previously described and developed an Analgesia Nociception Index (ANI) for real time pain measurement during surgical procedure under general anesthesia. This index, based on heart rate variability analysis, constitutes a measure of parasympathetic tone and can be used in several other environments. In this paper, we hypothesized that such an index could be used as a tool to investigate the processes of emotional regulation of a human subject. To test this hypothesis, we analyzed ANI's response to a negative emotional stimulus. This analysis showed that the index decreases during the emotion induction phase and returns to its baseline after 2 minutes. This result confirms that ANI could be a good indicator of parasympathetic changes in emotional situation.
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