

Abstract - Iben

Both opioids, and serotonin-noradrenalin reuptake inhibitors (SNRIs) are used in pain treatment but their effects are caused by different pharmacological pathways and the individual response to the single analgesics is different. Furthermore, the contribution of the different neurochemical mechanisms to peripheral, spinal and supraspinal analgesia is not fully elucidated. To get a better understanding of the analgesic mechanisms, methods sensitive to detect and differentiate opioid and SNRI effects at the spinal and supraspinal level is needed.

The overall objective in this PhD thesis was to evaluate the ability to detect spinal and/or supraspinal activation in selected objective and subjective assessments after administration of two opioids and a SNRI. Based on a literature search and two different experimental pain studies in healthy volunteers, this PhD thesis (1) describes and discuss the most common objective methods for assessment of the spinal and supraspinal effects of opioids; (2) explores whether electrophysiological changes at the spinal and supraspinal levels were correlated after administration of morphine; (3) investigates differences between venlafaxine and oxycodone on the spinal and supraspinal level after evoking of the nociceptive withdrawal reflex (NWR); (4) evaluates whether morphine, oxycodone or venlafaxine modulate the offset analgesia (OA) effect, by mean of a subjective pain rating.