INTRODUCTION / AIM

Several studies demonstrated the influence of the pain affective component on endogenous mechanisms of pain modulation. We recently found that conditioned pain modulation (CPM) can be triggered by the mere observation of someone in pain in healthy subjects. In this study, we investigated the influence of suffering from chronic pain on Empathic Pain Modulation (EPM). We were particularly interested in studying provoked vestibulodynia (PVD), a predominant cause of pain affection in 12% of young women. The aim of this study was to determine if the fact that the observer is suffering or not from chronic pain will affect differently EPM while watching someone else’s pain.

METHODS

Thirty-eight healthy women and twenty women with PVD participated in four experimental sessions (1- CPM condition, 2- neutral video, 3- woman in pain video and 4- man in pain video). CPM was measured by the application of a thermal stimulation before and after a 2 minutes cold pressure test at either 10 or 30°C. First, the CPM efficiency of all participants was measure while immersing their forearm in a 10°C bath water (CPM condition) or in a 30°C bath water while watching a video (neutral, woman in pain or man in pain).

RESULTS

The efficiency of CPM significantly differs between groups. Indeed, in pain condition healthy women (HW) showed a higher analgesic effect (HW: -30.77; PVD: 1.63; t= 2.3, p=0.025). Neutral condition did not trigger CPM in both groups (HW: -5.09; PVD: 3.05; t=0.59, p=0.56). Interestingly, healthy women showed a CPM effect while watching the video of the woman in pain while PVD women showed a hyperalgesic reaction (HW: -10.63; PVD: 41.21; t=2.92, p=0.005). Finally, no group difference was found in while watching the man in pain condition (HW: 2.56; PVD: 13.06; t=0.68, p=0.5).

DISCUSSION / CONCLUSIONS

The observation of someone in pain, even an unknown person, is triggering CPM. However, the characteristics of the observer influence CPM efficiency according to the gender of the observed person. Living with a chronic pain condition seems to be a factor affecting Empathic Pain Modulation.

OTHER AUTHORS