Effects of local placebo analgesia on picture-based pain empathy

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Medium

pain

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BACKGROUND

- First-hand experience and empathy for pain have common mental representations: shared representations account¹
- Placebo analgesia (PA) reduces

RESEARCH GAP

- Only modulation of affective, but not somatosensory areas^{2,3}
- Mismatch might be due to specifics of the used experimental paradigm⁴⁻⁶
- Unclear whether picture-based pain

QUESTION

Does placebo analgesia modulate empathy for everyday painful

both one's own pain as well as empathy for pain^{2,3}

empathy not involving first-hand experiences⁷ is modulated by PA

situations?

METHODS





Placebo cream Classic conditioning application by procedure to amplify medical cover placebo effect

RESULTS





"How painful for the person?"

ID OSTROL

"How unpleasant for you?" 7.5





TASK

15 everyday situations x 2 treatments x 2 intensities = 60 trials (one run)



No significant clusters in the two contrasts comparing the hands

pla/p ^{1.5} $pla/np^{2.5}$ $ctr/np^{3.5}$ $ctr/np^{4.5}$

Placebo (p > np) > Control (p > np) Control (p > np) > Placebo (p > np)







Ins

Picture 3.5 s

Ratings (order randomized) 4 s each

STIMULI

SAMPLE







placebo - no pain control - no pain

Fixation dot

5 +/- 2 s



analgesia responders (26 % nonresponders)

Stable belief in medication and no doubts about setup









treatment





CONCLUSION First-hand placebo analgesia does not generalize to empathy for everyday painful situations

REFERENCES

5. Wager & Atlas (2015) 1. Lamm, et al. (2011) 6. Keysers et al. (2010) 2. Rütgen et al. (2015, PNAS) 7. Jackson et al. (2005) 3. Rütgen et al. (2015, JNeurosci) 4. Benedetti et al. (2005) 8. Tran et al. (2014)

Imaging results are displayed using a preliminary whole-brain analysis with an initial threshold of *p* < .001 uncorrected and a FWE-corrected cluster-forming threshold (295) voxels). Anatomical regions were labelled with SPM's Anatomy toolbox (Version 1.5).

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