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Pain

Lectures

CO58-001-e

Placebo and nocebo effects in pain treatment: Clinical implications

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Keywords: Placebo effect; Nocebo effect; Pain treatment

The placebo, when prescribed with an analgesic intent, induces a placebo effect that often mimics the analgesic properties of a tested drug in clinical trials.

Real psycho-neurophysiological event, this placebo effect is influenced by patient's expectations and past experiences, doctor's convictions and suggestions, and the doctor-patient relationship. It results from activation of several pain control systems, mainly opioid and dopaminergic.

Nevertheless, in some cases, the prescription of a placebo or analgesic drug can be followed by pain increase without worsening of disease. This nocebo effect is often observed when the patient has negative expectations:

– fear of drug and it side effects influenced by negative past expreriences or anxiogenic information;

– or when the doctor-patient relationship is poor.

This hyperalgesic nocebo effect could mainly result from activation of cholecystokininergic systems facilitating the transmission of painful messages.

In clinical practice, a better understanding of factors involved in placebo and nocebo effect should allow potentiating the analgesic effects of prescribed pain treatment.

Further reading

Benedetti F. Placebo effects: understanding the mechanisms in health and disease. Oxford: Oxford University Press; 2009.

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CO65-001-e

Emotion and neuropathic pain

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Keywords: Emotion; Neuropathic pain

The pathophysiology of neuropathic pain suggests that clinical symptoms fluctuate with emotional state in patients, a hypothesis that seems verified by clinical practice. We will review arguments in favor of an emotional modulation of the neuropathic clinical picture, which might shed light for mechanisms of action in non-pharmacological therapeutical approaches, such as hypnosis or cognitivo-behavioral therapy.

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Oral communications

CO58-002-e

Manipulating expectation of pain inhibition elicits differential effects on cortical and spinal level nociceptive processing

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Keywords: Conditioned pain modulation; Expectation; Nociceptive flexion reflex

Introduction.– Impaired conditioned pain modulation is common in chronic pain conditions and may increase the risk of persistent postoperative pain. The aim of this study was to determine if manipulating the expectation of pain inhibition can enhance conditioned pain modulation.

Methods.– In 19 healthy males, the lower limb nociceptive flexion reflex was elicited in isolation (test stimulus) and during application of two forms of painful conditioning stimuli. Following application of the first conditioning stimulus (CS1), the participants were informed that the subsequent conditioning stimulus (CS2) would elicit a greater amount of inhibition of test pain compared to the first. Lower limb flexion reflex size, perceived pain ratings of the test stimulus, and ratings of expected pain modulation were measured.

Results.– Pain inhibition was significantly greater with CS2 compared to CS1 ($P = 0.003$); however, there was no significant difference in inhibition of nociceptive flexion reflex size ($P = 0.8$) between the two conditioning stimuli.

Discussion.– These findings suggest that cognitive suggestion led to inhibition of nociception at a supraspinal level without influencing spinal nociceptive processing. The finding that conditioned pain modulation can be enhanced with cognitive suggestion may be relevant in the prevention and treatment of chronic pain.

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Usefulness of music therapy among patients hospitalized in convalescent and rehabilitation units for the elderly

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