JOURNAL WATCH

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Our panel of experts highlight the most important research articles across the spectrum of topics relevant to the field of pain management

Expert panel: John D Loeser, University of Washington, WA, USA; Dominic Chamberlain, Future Medicine Ltd, London, UK

Johansen A, Schirmer H, Stubhaug A, Nielsen CS. Persistent post-surgical pain and experimental pain sensitivity in the Tromsø Study: comorbid pain matters. *Pain* doi:10.1016/j.pain.2013.10.013 (2013) (Epub ahead of print).

In this study the authors conducted a large survey incorporating medical examination ($n = 12,981$). The authors collected information on chronic pain and surgery, and tested sensitivity to different pain modalities. The researchers analyzed tolerance to the cold pressor test, with survival statistics for 10,486 individuals. Additionally, the team calculated perceived cold pressor pain intensity for 10,367 individuals and assessed heat pain threshold for 4054 individuals and pressure pain sensitivity for 4689 individuals.

The authors report that self-reported, persistent postsurgical pain was associated with lower cold pressor tolerance (sex-adjusted hazard ratio: 1.34; 95% CI: 1.08–1.66); however, this was not the case when adjusting for other chronic pain. Other experimental pain modalities did not differentiate between individuals with or without postsurgical pain. Of the included individuals with chronic pain ($n = 3352$), 6.2% indicated that surgery was a cause; however, only 0.5% indicated surgery as the only cause. The authors suggest that the associations found between persistent postsurgical pain and cold pressor tolerance can be largely explained by the coexistence of chronic pain from other causes. The team concluded that in most cases, persistent postsurgical pain is coexistent with other

chronic pain, and that in an unselected postsurgical population persistent postsurgical pain is not significantly associated with pain sensitivity when controlling for comorbid pain from other causes. Additionally, the authors hypothesize at the end of the article that a low prevalence of self-reported persistent pain from surgery attenuates statistically significant associations – that is, general chronic pain is associated with central changes in pain processing as expressed by reduced tolerance for the cold pressor test.

– Written by Dominic Chamberlain

Martin S, Daniel H, Williams A. How do people understand their neuropathic pain? A Q-study. *Pain* doi:10.1016/j.pain.2013.10.021 (2013) (Epub ahead of print).

Patients suffering with neuropathic pain (NP) do not easily understand the diagnosis. Often, even in specialist medical services, an explanation may not be given or may not be integrated with patients' existing beliefs about their condition. In this study, the authors aimed to understand how individuals with NP conceptualized the problem. Using websites relevant to NP the authors recruited 79 individuals with an existing diagnosis of NP. The subjects were sampled using Q-methodology, requiring sorting according to degree of agreement or disagreement with diverse statements about NP, derived from the widest possible range of sources. The authors then analyzed the sets of sorted statements for factors that represent

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shared constructions. The authors report that the four factors that they observed differed in important ways: identification of nerve damage as cause; the necessity of identifying the cause; the acceptability of symptomatic treatment; the existence or not of psychological influences; and the usefulness of psychological treatment. The authors' approach allowed the meaning of these factors to be extended by participants' free comments: certain viewpoints showed associations with their medical and treatment history, and with interference by pain in daily life. The results of the study suggested that overall, a biopsychosocial model of pain was only weakly represented, and no integrated model of pain emerged across the four different accounts. The authors report that there was little reference to NP being explained when the diagnosis was made. The team comment that this study highlights the need for more accessible explanations of NP within and outside medical services if people with NP are to use their understanding of the condition to help them manage their pain more effectively and reduce its impact on their lives.

– Written by Dominic Chamberlain

Litt M, Porto F. Determinants of pain treatment response and nonresponse: identification of TMD patient subgroups. *J. Pain* 14(11), 1502–1513 (2013).

In this study, the authors aimed to determine whether they could identify a specific subtype of temporomandibular disorder (TMD) pain patient who does not respond to treatment. In the study, men and women with chronic TMD were recruited from the community ($n = 101$) and randomly assigned to one of two treatment conditions: a standard conservative care condition or a standard care plus cognitive-behavioral therapy (CBT) condition where patients received all elements of standard conservative care in addition to cognitive-behavioral coping skills training. The authors used growth-mixture modeling, incorporating

a series of treatment-related predictors, to distinguish several distinct classes of responders or nonresponders to treatment based on reported pain over a 1-year follow-up period. The authors reported that treatment nonresponders accounted for 16% of the sample and did not differ from treatment responders on demographics or temporomandibular joint pathology, however, they had more psychiatric symptoms, poorer coping and higher levels of catastrophizing. Treatment-related predictors of membership in treatment responder groups versus the nonresponder group included the addition of CBT to standard conservative care, treatment attendance and decreasing catastrophization. The team conclude that CBT may be made more efficacious for TMD patients by placing further emphasis on decreasing catastrophization and on individualizing care. Discussing their results, the authors suggest that the present article provides some evidence that the TMD chronic pain population is heterogeneous and that a subsample of patients will be unresponsive to standard or psychosocial approaches. They suggest that the addition of CBT to treatment may be helpful for this group; however, new individualized approaches will be needed to treat all patients effectively.

– Written by Dominic Chamberlain

Vase L, Baram S, Takakura N et al. Specifying the nonspecific components of acupuncture analgesia. *Pain* 154(9), 1659–1667 (2013).

Acupuncture analgesia has been observed for millennia, yet the roles of specific and nonspecific effects have been poorly delineated in spite of myriads of published studies. This report concerns 101 patients who had a pain score of at least three out of ten on a visual analog scale after third molar extraction surgery under local anesthesia. Subjects were randomized to receive either active acupuncture, placebo acupuncture or no treatment for 30 min after their surgical procedure. There was

no effect of active acupuncture, but there was a large effect of placebo acupuncture. Patients who believed that they had received active acupuncture had lower pain levels than those who believed that they had received placebo, even if those who believed that they had received a placebo had, in fact, gotten active acupuncture. In addition, pain levels after the third molar extraction were predicted by the participants' preoperative expectations. Hence, expectations and perceptions of treatment were much more important than a specific effect of acupuncture upon postoperative pain levels. The authors propose that those who wish to use acupuncture as treatment for acute pain should make use of patient expectations and the power of suggestion to achieve good treatment results.

I am sure that this paper will stir up many antagonistic comments from those who believe in acupuncture or who earn their living practicing it. This work has importance beyond the question of acupuncture as a treatment modality for acute pain, for it shows that patient expectations are a major determinant of postprocedural pain and of the effects of treatments on such pain. I am reminded of the patient who traveled over 500 miles to our pain clinic to receive acupuncture treatment many years ago, thinking that her provider would be Dr Mur Phee. Upon entering the examination room, she took one look at Dr Terence Murphy and exited the room, exclaiming "You're not Chinese". Patient expectations do matter, and this is an elegant study that demonstrates this point.

– Written by John D Loeser

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