

ACUPUNCTURE: HELPFUL OR HARMFUL?

Acupuncture is commonly considered to be an effective 'alternative' treatment for the management of both acute and chronic pain. Anecdotal reports of surgery completed under acupuncture and effective treatment of persistent pain are commonly heard. However, careful scientific investigation of the effectiveness of acupuncture yields contradictory and surprising results.

An article, with an accompanying editorial, was published in the latest edition of the journal *Pain*, the flagship journal of the International Association for the Study of Pain. Ernst, Lee and Choi completed a review of the literature published since 2000 respecting the efficacy of acupuncture.¹

Ernst, Lee and Choi reviewed the results of 57 systematic reviews of the efficacy of acupuncture treatment for a wide range of painful conditions. They judged 4 reviews to be of excellent methodologic quality and 19 of poor quality. They noted that 25 reviews reached a clearly or tentatively positive conclusion about the efficacy of acupuncture. The remaining 32 did not. They also noted that several recent controlled studies² have shown no difference between sham acupuncture and traditional acupuncture although commonly both procedures are superior to care as usual or no care. This suggests that non-specific placebo effects are the primary determinant of positive reports of acupuncture intervention.

Second, and perhaps most disconcertingly, the review by Ernst, Lee and Choi noted 95 case reports of severe adverse effects including 5 fatalities. Pneumothorax and infections were the most frequently reported adverse events. Four patients died secondary to pneumothorax. One patient died of an aorta duodenal fistula and shock. Other severe complications included a patient who suffered injury of the arteria brachialis, with ischemia of the hand, requiring amputation below the elbow.

In an accompanying editorial, Hall³ stated: *"it does not make any difference where you put the needles or whether you use needles at all. Touching the skin with toothpicks works just as well. The crucial factor seems to be whether patients believe they are getting true acupuncture. It is becoming increasingly clear that the surrounding ritual, the beliefs of patient and practitioner, and the non-specific effects of treatment are likely responsible for any reported benefits"*.

Hall reviews the reported risks and stated: *"with any treatment we have to consider the risk/benefit ratio. If there is no benefit, any risk is too much and there are other harms that they (Ernst et al) did not mention: time and money wasted, effective treatment delayed, unscientific thinking encouraged"*.

The points in both the review and the commentary are very well taken. There is really no consistent scientific evidence that acupuncture is superior to a placebo control. There are in some cases marked adverse effects. Perhaps however the most common adverse effect is that pointed out by Hall; that is the encouragement of unscientific thinking and endorsement of treatment with no demonstrated scientific efficacy.

Similar points were made by Bausell in his 2007 monograph.⁴ The widespread use of procedures, pills and potions with no demonstrated scientific efficacy is of concern especially when health care providers directly or indirectly endorse the pursuit of such treatments. It is of course the case that practitioners can become as desperate as patients when trying to assist patients to manage their suffering and function in spite of chronic pain.

However, encouraging the rejection of proven interventions as well as pursuit of ineffective interventions surely cannot be justified. It is true that for many patients effective treatment of chronic pain and chronic pain-related disability can be difficult and arduous. It involves challenging strongly held beliefs and abandoning the search for a magical cure. On the other hand, the efficacy of interdisciplinary, behavioural, and cognitive behavioural interventions is well established.⁵ What is needed is for health care providers to resolutely support such evidenced based intervention, in spite of their challenges for patients, for the simple reason that it is truly in the patient's best long-term interest to do so.

Finally, perhaps the greatest harm comes when we inadvertently reinforce the notion that science is only one way of establishing valid knowledge, and that alternative, non-scientific ways (whatever they might be) somehow should be given equal weight. The latter certainly is in direct contradiction to the notion of evidence-based health care.

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¹Ernst, E., Lee, M.S. and Choi, T.Y. (2011) Acupuncture: Does it Alleviate Pain and are there Serious Risks? A Review of Review. Pain 152, 755-764.

²Cherkin, D.C., Sherman, K.J., Avins, A.L., Erro, J.H., Ichikawa, L., Barlow, W.E., Delaney, K., Hawkes, R., Hamilton, L., Pressman, A., Khalsa, P.S. and Deyo, R.A. (2009) A Randomized Trial comparing Acupuncture, Simulated Acupuncture, and Usual Care for Chronic Low Back Pain. Archives of Internal Medicine, 169 858-866; Madsen, M.V., Gotzsche, P.C. and Hrobjrtsson, A. (2009) Acupuncture Treatment for Pain: Systematic Review of Randomized Clinical Trials with Acupuncture, Placebo Acupuncture and no Acupuncture Groups. British Medical Journal . 338: a3115; and Suarez-Almazor, M.P., Looney, C., Liu, Y., Cox, V., Pietz, K., Marcus, D.M. and Street Jr., R.L. (2010) A Randomized Control of Acupuncture for Osteoarthritis of the Knee: Effects of Patient Provider Communication. Arthritis Care Research . 62: 1229-1236.

³Hall, H. (2011) Acupuncture's Claims Punctured: Not Proven Effective for Pain, Not Harmless. Pain 152: 711-712.

⁴Bausell, R.B. (2007) Snake Oil Science: The Truth about Complimentary and Alternative Medicine. Oxford University Press.

⁵See our earlier Bulletin of June 2010.