

Future directions of acupuncture in research and practice

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In the last 40 years, extensive valuable research has been conducted on acupuncture concerning its effect and working mechanism. Meta-analysis and systematic reviews show that acupuncture and related technique is effective in a range of disorders, such as nausea and vomiting after chemotherapy,(1) epicondylitis lateralis, (2) tension headaches,(3) neck pain (4) and knee pain, (5) but it seems to be useful for rehabilitation. Also, several theories concerning the working mechanism of acupuncture have been validated with basic scientific research, such as the neurohumoral theory explaining pain reduction through the release of neurotransmitters.

Besides basic research unraveling the working mechanism, clinical research is important for the evaluation of the effectiveness of acupuncture. Future trials should especially be based on pragmatic designs. Trials comparing acupuncture treatment versus the golden standard care should be promoted, instead of placebo controlled trials. As a matter of fact, pragmatic studies generally show that acupuncture is superior over standard care. Also acupuncture provokes usually less adverse effects, compared to standard care, which is often pharmacological treatment. Other types of study, especially in this period of economical crisis, such as cost effectiveness and patient satisfaction studies, should be also strongly promoted. Sparse cost effectiveness studies clearly indicate the advantages of acupuncture therapy in pain management.

Another important issue is the implementation of acupuncture therapy in guidelines, once acupuncture has proven to be effective for a certain indication. First of all, transparent explanations should be given to colleagues. For example in using the following statement, *acupuncture is a form of neuromodulation, which releases pain reducing neurotransmitters, such as endorphins, dopamine and serotonin. Various pain syndromes can be treated effectively with acupuncture, based on distinguished meta-analyses and systemic reviews.* The second step is to recruit ambassadors collaborating with guidelines developers, armed with a clear evidence based paper on acupuncture for a particular indication. Continuous monitoring of this implementation process is essential for lasting success.

Eventhough **NATO RTO 196 project** (6) has taken into account different types of CAM therapy for period 2011-13. Introducing Ear-ASP program into military healthcare it was proven to be effective in dangerous circumstances. This issue of implementation is directly connected to professional education. Not only medical doctors but medical students should have the basic scientific knowledge and practical skills of acupuncture, which leads to more acceptance and practice in the medical community.

On the level of politics, health laws and customs can be influenced. The European Union voted **CAMBrella** project lasting 3 years for summary definitions on CAM, demand of providers and patient, future support for researches in this field.(7)

Even more simple explanation of the therapy has to be given, with the focus on cost effectiveness, patient satisfaction and the autonomy of the patient to have the right to chose a therapy. For instance, *acupuncture is an intervention which releases body-own analgesics and*

therefore, acupuncture has minimal adverse effects. Acupuncture is part of evidence based medicine for several pain syndromes. Acupuncture can be cost effective by reducing complaints, the use of medication and the adverse effects of concurrent pharmacological therapy. Therefore, acupuncture should be considered as a standard therapeutic option.

Health insurance companies have gained more and more influence on health policy in the European countries. Cost effectiveness and patient satisfaction can be stressed as important issues. Therefore, the alliance with these important parties to conduct cost-effectiveness and patient satisfaction studies comparing standard care and acupuncture is a pragmatic strategy to evaluate the strength of acupuncture. Positive outcomes for acupuncture should lead to their structural reimbursement.

In this era of the accessibility to world-wide information, patients can read a lot about a myriad of cures on the internet. Therefore, specialization in a certain disease is essential to be able to inform the patient impeccably and objectively concerning the existing therapies. The ideal future medical doctor will be specialized in a certain domain and will integrate then these therapies which are proven to be safe and effective. Acupuncture could be one of them.

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