Special Lectures from Japan

SL2  Introduction of the Japanese acupuncture and possible role of the polymodal receptor in its action mechanisms

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Acupuncture and moxibustion therapy in Japan has a long history, and it has developed differently from the Chinese or Korean procedures. The use of a guide tube for the insertion of a fine acupuncture needle without pain, shallow needling and use of intradermal needle without “de-qi” are known as Japanese acupuncture techniques. Our previous study clearly demonstrated variations of the point selection and methods of procedures among the Japan, Korea and Chinese traditional acupuncture therapy on the same subjects. The results obtained by three kinds of traditional acupuncture therapies were also different.

The majority of basic research and clinical trials of acupuncture have used Chinese acupuncture procedure using thick needles with “de-qi” sensation. Participation of the endogenous opioids in relatively intense electro-acupuncture induced analgesia has been well established, but similar analgesia is also induced by stressful stimuli such as electrical foot shock, so opioid-mediated analgesia is not the specific phenomena induced by acupuncture therapy.

![Diagram](source)

**Fig. 1** Polymodal receptor hypothesis of acupuncture and moxibustion
Acp: acupuncture; Mox: moxibustion
Recent literature survey of the Ma Wang Dui (馬王堆) tomb clearly demonstrated the moxibustion (cauterization) was the primitive therapeutic procedure and the meridian concept was established by moxibustion not by acupuncture therapy. On the peripheral mechanisms, various sensory receptors could be activated by acupuncture but receptors responsive to moxibustion are limited. The polymodal receptors (PMRs), which responsive to mechanical, thermal and chemical stimuli, are activated by both acupuncture and moxibustion. They are also responsive to gentle skin scratching and pressure application with blunt acupuncture needle which used as sham acupuncture in recent clinical trials. Sensitization of the PMRs might be a possible cause of acupuncture point formation. These several lines of evidence suggest the PMRs are the key candidates of the action mechanisms of acupuncture and moxibustion. Figure 1 shows schematic illustration of the polymodal receptor hypothesis of action mechanisms of acupuncture and moxibustion.

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