OS05.05

Correlation between acupuncture points and plasma leakage points are observed in the colon pain model induced by mustard oil

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Purpose: The meridian system is originated from concept of invisible line which connects between internal organ and specific point in the body surface. And specific points are discovered by observing reaction of patients after pushing patient’s skin with doctor’s hand. And it is so called Ashi-points which means points make patient scream “Ah!” In this study, we suppose that the ashi-points have relation with referred pain, and thus observed an aspect of revelation of referred pain area visualized by evans blue dye.

Methods: SD-rats (250 g) were injected evans blue dye through caudal vein while anesthetized with mixture of Zoletil and Rom pun. 10 minutes later, silicone guide and Q-tip absorbing mustard oil was inserted to the large intestine in depth of 3, 5, 7 cm from the anus. Evans blue sign was observed after 30 minutes after insert of the Q-tip. The location, size and shape of evans blue sign was recorded in the chart developed after 30 minutes after insert of the Q-tip. The location, size and shape of evans blue sign was recorded in the chart developed to record the sign area and charts were merged by u sing the Adobe Photoshop program.

Results: More than 90% of evans blue sign were located in the hind paw. Specially, many signs were located in the lateral side of the foot (border between the red and white flesh). Most of signs have shape of long ellipse, and headed same direction. The sign mainly located in rows around navicular tubercle. The signs had tendency of distinguished by the depth but there were no significant border for distinguish the signs.

Conclusion: In this study, we have visualized referred pain area by using evans blue dye, and confirmed that the signs has tendency of forming lines, and many acupuncture points are located in the same anatomical area. In spite of the results of this study, we have confirmed only one-way communication and to confirm two-way communication, we plan to ob serve treatment effects of the sign area.

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The differences in expression levels of depression-related proteins in hippocampal of CUMS rats by treating of electro acupuncture

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Purpose: Antibody microarray is applied to detect hippocampal tissue of chronic unpredictable mild stress (CUMS) rats, and the proteins which are significant different in expression are selected, in order to provide the experimental basis for discovering potential depression-related biomarker and clinical application of EA treatment of depression.

Methods: 1. A total of 40 SD rats were equally randomized into normal, model, control, EA and Prozac groups. The depression model was established by CUMS. “Bai-Hui” (DU20) and “Yin-Tang” (DU29) points were used with EA. Prozac were used as positive control drug. 2. Open field test, sugar intake, and body weight were used to evaluate the CUMS model. 3. Collect hippocampal tissues of normal, model, control, EA and Prozac groups to compare and analysis different proteins expression of four groups by Ray biotech Rat L-series cytokine antibody chips.

Results: After 28 days of CUMS, compared with control group, rats’ behaviors, body weight and sugar intake of EA and Prozac groups all had significant differences (P<0.01), however, there were no significant differences between EA group and Prozac group (P>0.05). The proteins EGFR and VEGF are both down-regulated in EA and Prozac groups compared with control group. EGFR which involves in AKT signal pathway contributes to cell proliferation and differentiation. VEGF which involves in MAPK signal pathway could promote nerve growth and angiogenesis and regulate the brain microenvironment.

Conclusion: EA can effectively reduce or prevent the occurrence of depressive behaviors of CUMS rats. The effect of EA was similar to Prozac. The mechanism of EA and Prozac to treat depression was related to regulate multiple protein expressions of hippocampal tissue, which happens in several signal pathways. VEGF which is different in expression level was closely related to nerve regeneration and angiogenesis, indicating that EA and Prozac might treat the depression through regulating the brain microenvironment.

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Influence of electro-acupuncture on TGF-β3, FSL-1 and IL-1β expression in chronic unpredictable mild stress rats

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Purpose: To observe the effect of electroacupuncture (EA) on transforming growth factor-β3(TGF-β3), follistatin-like protein-1(FSL-1) and interleukin-1β (IL-1β) of hippocampus in chronic unpredictable mild stress (CUMS)-induced depression rats.

Methods: Male adult Sprague-Dawley rats were randomly divided into four groups: control group, model
group, model+EA group, and model+fluoxetine group. Use biotin-labeled protein chip technology to detect the protein expression of TGF-β3, FS L-1 and IL-1β of hippocampus.

**Results:** Compared to the control group, the protein expression of TGF-β3 in the model group were down-regulated (fold change= 0.48), FSL-1 and IL-1β were up-regulated (fold change=1.27; 1.57). Compared to the model group, the protein expression of TGF-β3 were up-regulating in the model+EA group (fold change=1.61) and the model+fluoxetine group (fold change=1.60), while the protein expression of FSL-1 and IL-1β were both down-regulating in the model+EA group (fold change=0.75; 0.60) and the model+fluoxetine group (fold change=0.67; 0.54).

**Conclusion:** The results showed that EA improved significantly dysfunction of hippocampus by facilitating hippocampal neuron differentiation and preventing them apoptosis and inflammation, which was as effective as fluoxetine. Consequently, EA is a useful antidepressant treatment for depression model rats.

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Oral Presentation Session 06: Research Methodology

**OS06.01**

Which Chinese herbal medicine formula performs best when used with salmeterol for chronic obstructive pulmonary disease? Network meta-analysis

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**Purpose:** Chinese herbal medicine (CHM) is often prescribed as an adjunct to guideline recommended bronchodilators in the management of chronic obstructive pulmonary disease (COPD). We performed a systematic review and network meta-analysis (NMA) to evaluate the comparative effectiveness of CHM plus bronchodilators, versus bronchodilators alone.

**Methods:** Fifteen randomized controlled trials with moderate risk of bias were included.

**Results:** Results from meta-analyses indicated favorable, clinically relevant benefit of CHM plus salmeterol on changes in FEV1 (7 studies, pooled weighted mean differences (WMD) = 0.20 L, 95% confidence interval (CI): 0.06 to 0.34 L), changes in the St George’s Respiratory Questionnaire scoring (SGRQ) (5 studies, pooled WMD = -4.99, 95% CI: -7.73 to -2.24). Improvement on the 6-Minute Walk Test (3 studies, pooled WMD = 32.8 meters, 95% CI: 18.3 to 47.4 meters) was also observed but the magnitude of effect was clinically insignificant.

**Conclusion:** Results from NMA showed no differences on the comparative effectiveness among CHM formulations for improving FEV1. For SGRQ, NMA suggested that...