

冠脉血栓形成的中医体质特点临床研究

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[摘要]目的: 观察冠脉血栓形成的中医体质特点, 为早期防治冠脉血栓形成提供临床依据。方法: 将冠脉造影明确为冠心病的患者根据造影结果分为2组。冠脉血栓形成组32例, 无冠脉血栓形成组68例。观察2组体质分布特点、冠脉病变积分及血栓素 B_2 (TXB $_2$)、血管性血友病因子(vWF)。结果: 冠脉血栓形成组以瘀血质、痰湿质多见, 而无冠脉血栓形成组以气虚质、气郁质、阴虚质多见($P < 0.01$); 冠脉病变积分在瘀血质、痰湿质、气虚质、气郁质、阴虚质中存在明显差异, 瘀血质 > 痰湿质 > 气虚质、气郁质、阴虚质($P < 0.01$)。TXB $_2$ 、vWF比较, 瘀血质 > 痰湿质 > 气虚质、气郁质、阴虚质($P < 0.05$, $P < 0.01$)。结论: 冠脉血栓形成的体质以瘀湿质、瘀血质多见, 痰湿质、瘀血质之人易处于高凝状态, 容易形成血栓。

[关键词]冠脉血栓; 冠状动脉疾病; 中医体质; 体质分型

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血栓的形成是导致心血管事件的最关键环节, 是致死和致残的直接原因^[1]。据报道^[2], 冠脉造影、血管内超声或血管镜检查发现, 在药物难治性的急性冠脉综合征(ACS)患者中, 冠脉内血栓的发生率高达40%~90%。中医学认为, 疾病发生与否, 主要取决于正气的盛衰, 而正气的强弱和个体体质状况密切相关。笔者通过研究冠脉血栓形成的中医体质特点, 为从体质因素早期防治冠脉血栓形成提供临床依据。

1 临床资料

1.1 一般资料 观察病例为本院2007年10月~2009年3月经冠脉造影明确诊断为冠心病的患者, 共100例, 根据造影结果分为2组。其中冠脉血栓形成组32例, 无冠脉血栓形成组68例。冠脉血栓的判断按《冠状动脉造影与临床》^[3]: 冠脉充盈缺损和/或心肌梗死溶栓试验(TIMI)血流0~2。冠脉血栓形成组男20例, 女12例; 年龄47~72岁, 平均(53.2±4.5)岁; 病程1小时~3年, 平均(10.8±1.6)月。无冠脉血栓形成组男41例, 女27例; 年龄45~70岁, 平均(55.7±6.3)岁; 病程10小时~3.6年, 平均(9.4±2.8)月。2组性别、年龄、病程等经统计学处理, 差异均无显著性意义($P > 0.05$)。

1.2 排除标准 重度神经官能症、更年期综合征、甲亢、颈椎病、胆心病、胃及食管反流等所致胸痛者; 严重心律失常以及肝、肾、造血系统等严重原发性疾病和精神病患者; 有明确细菌感染、病毒感染、急慢性炎症性和免疫性疾病者; 因观察资料不全而影响判断者。

2 方法

2.1 冠脉严重程度判断 冠脉造影采用Judkins法, 造影结

果由2名有经验的心内科医师共同阅片并给出报告。冠脉严重程度根据狭窄部位、多支或多处病变、慢性闭塞病变等情况采用冠脉病变积分[(CSS), Gensini法]法进行判断: ≤25% 1分, ≤50% 2分, ≤75% 4分, ≤90% 8分, ≤99% 16分, 100% 32分。不同节段冠状动脉评分系数为左主干×5, 前降支近段×2.5, 中段×1.5, 远段及第一对角支×1; 回旋支近段×2.5, 远段×1, 钝缘支×1; 右冠脉近段、中段及远段均×1; 后降支×1, 左室后侧支×0.5。冠状动脉病变程度的最终积分为各支积分之和。

2.2 生化指标检测 造影结束后抽血进行血栓素 B_2 (TXB $_2$)、血管性血友病因子(vWF)的检测。TXB $_2$ 的测定: 采用放射免疫法检测。血浆vWF的测定: 采取酶联免疫吸附法(ELISA)定量测定血浆中的vWF抗原(vWF: Ag)。

2.3 中医体质的判定 采用问卷调查表, 调查表在造影结束后发放, 结果由2名副主任医师判定。中医体质的判定采用王琦的九分法为编制量表的结构框架, 将中医体质量表设定为平和质、气虚质、阳虚质、阴虚质、痰湿质、湿热质、瘀血质、气郁质、特禀质九个亚量表, 平和质之外的八种体质均属于偏颇体质类型。

2.4 统计学方法 所有数据采用PEMS3.1统计软件进行分析。两样本构成比的比较采用卡方检验, 多组间计量资料的比较采用方差分析。

3 结果

3.1 2组体质分布情况比较 见表1。2组体质比较, 差异有非常显著性意义($P < 0.01$)。冠脉血栓形成组以瘀血质、痰

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湿质多见,而无冠脉血栓形成组以气虚质、气郁质、阴虚质多见。

表 1 2 组体质分布情况比较 例

组别	n	气虚质	阳虚质	阴虚质	痰湿质	湿热质	瘀血质	气郁质
冠脉血栓形成组	32	1	0	3	11	0	17	0
无冠脉血栓形成组	68	22	4	12	5	3	5	17

3.2 2 组体质冠脉病变积分、TXB₂、vWF 比较 见表 2。冠脉病变积分在瘀血质、痰湿质、气虚质、气郁质、阴虚质中存在明显差异,瘀血质 > 痰湿质 > 气虚质、气郁质、阴虚质 ($P < 0.01$)。TXB₂、vWF 比较,瘀血质 > 痰湿质 > 气虚质、气郁质、阴虚质 ($P < 0.05$, $P < 0.01$),表明瘀血质、痰湿质的冠脉血栓形成要高于其余 3 种体质。

表 2 2 组体质冠脉病变积分、TXB₂、vWF 比较($\bar{x} \pm s$)

组别	n	冠脉病变积分	TXB ₂ (ng/L)	vWF(%)
冠脉血栓形成组	痰湿质	11 49.2 ± 11.5 ^①	351.64 ± 41.73 ^①	244.37 ± 28.62 ^①
	瘀血质	17 57.3 ± 10.8 ^{②③}	384.37 ± 32.18 ^③	276.86 ± 41.39 ^{②③}
无冠脉血栓形成组	气虚质	22 31.4 ± 7.9	255.92 ± 44.52	179.22 ± 31.54
	阴虚质	12 20.7 ± 9.9	171.26 ± 36.28	121.65 ± 29.35
	气郁质	17 28.1 ± 12.3	219.67 ± 28.34	155.93 ± 36.27

与气虚质、阴虚质、气郁质比较,① $P < 0.01$; 与痰湿质比较,② $P < 0.05$, ③ $P < 0.01$

4 讨论

研究^[4]表明,对怀疑血栓形成的病例早期进行冠脉造影(CAG)及进行支架或者冠脉内溶栓治疗,可以大大的降低病死率。目前国内较多用于临床防治冠脉血栓形成的多为二联(阿司匹林 + 氯吡格雷)和三联(阿司匹林 + 氯吡格雷 + GP IIb/IIIa 受体拮抗剂)的抗血小板治疗方案,但这些方案的最佳剂量和最佳给药持续时间目前仍然没有定论。而且这些方案费用昂贵,长期服药不仅增加了患者的经济负担,而且还增加患者出血的风险。如何更为有效地预防冠脉血栓形成仍然是当今一个亟待解决的问题。

冠心病是一种可控可防的疾病,解决冠心病的根本出路是预防。中医学认为,疾病发生与否,主要取决于正气的盛衰,而正气的强弱和个体体质状况密切相关。体质就其生理基础、表现特征和机能活动而言,是正气盛衰偏颇的反映。正气不足是机体发病的主导因素,人体的体质强弱是邪气能否致病的前提。干预偏颇体质,正是中医学治未病思想的体现,调整体质在未病先防、既病防变、病后防复方面都有重要意义。

本研究结果表明,冠脉血栓形成的体质分布以痰湿质、瘀血质多见,提示对这两种体质之人要早期进行血栓的防治。就冠脉病变的程度来看,瘀血质冠脉病变程度最严重,其次为痰湿质,气虚质、气郁质、阴虚质冠脉病变程度相对要低于痰湿质、瘀血质。vWF 作为凝血因子 VIII 的辅助因子,是血管内皮细胞下层黏附的中和物。内皮细胞损伤后释放 vWF,参与血栓形成,是血管内皮损伤的标志物之一,其水平升高提示血液处于高凝状态^[5-7]。TXA₂ 是花生四稀酸(AA)的重要代谢产物,它是一种强有力的血小板聚集物,有较强的促血凝作用。TXB₂、vWF 升高提示机体处于高凝状态,易导致血栓形成。本研究结果表明,痰湿质、瘀血质 TXB₂、vWF 高于气虚质、气郁质、阴虚质,说明痰湿质、瘀血质之人更易形成血栓。

综上所述,冠脉血栓形成的体质以痰湿质、瘀血质多见,痰湿质、瘀血质之人易处于高凝状态,容易形成血栓。对这两种人群进行早期防治,对预防冠脉血栓形成有重要意义。

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ABSTRACTS OF ORIGINAL ARTICLES

Exploration of Thoughts for Treating Pancreatic Cancer with Chinese Medicine
BAI Jianping(白建平), ZHANG Haibo(张海波), QU Xin(曲鑫), et al.

Abstract: Pancreatic cancer is the commonly-seen malignant tumor of digestive system. Most of the pancreatic cancer patients are in the middle and late stages when they have the final diagnosis. In the middle and late stages, the pancreatic cancer patients have low excision rate, and are insensitive to the chemical therapy. In such a case, comprehensive treatment with oral use and external application of Chinese medicine can enhance the therapeutic effect of excision. Oral use of Chinese medicine should be based on strengthening spleen and Qi for the root cause, resolving dampness and removing phlegm for the symptoms. External application of Chinese medicine should pay attention to the differences of regions of the head, body and tail of the pancreas.

(Original article on page 1)

Investigation of Yin and Yang Series-syndromes and Carotid Intima-media Thickness in Ischemic Stroke Patients with Impaired Glucose Tolerance

WU Haikang(吴海科), TAN Feng(谭峰), XU Xiangqing(徐向青), et al.

Abstract: Objective: To investigate the distribution of yin and yang series-syndromes, intima-media thickness (IMT), and neurologic impairment in ischemic stroke patients with impaired glucose tolerance (IGT). **Methods:** Based on the results of oral glucose tolerance test, 117 qualified patients were divided into normal glucose tolerance (NGT) group, IGT group and diabetes mellitus (DM) group. All of the patients were classified into yin series-syndrome or yang series-syndrome according to the symptoms and signs. The neurologic score evaluated by the National Institutes of Health Stroke Scale (NIHSS), blood glucose (BG) and IMT were examined. **Results:** The patients with yang series-syndrome accounted for 54.3% in IGT group and 57.9% in DM group, higher than 31.8% in NGT group, the difference being significant between the two groups ($P < 0.05$). NIHSS score in IGT group and DM group was higher than that in NGT group ($P < 0.05$ or $P < 0.01$). NIHSS score in IGT patients with yang series-syndrome was obviously higher than that in IGT patients with yin series-syndrome ($P < 0.01$). The difference of NIHSS score was insignificant between DM group and IGT group ($P > 0.05$). **Conclusion:** In ischemic stroke patients with IGT, Yang series-syndrome is dominant, IMT is increased and neurologic impairment is serious.

(Original article on page 10)

Preliminary Analysis of Comprehensive Therapeutic Regimen for Acute Ischemic Stroke Patients with Yin Series-syndromes

GUO Jianwen(郭建文), HUANG Yan(黄燕)

Abstract: Objective: To observe the therapeutic effect of traditional Chinese medicine (TCM) combined with western medicine (WM) for acute ischemic stroke patients with Yin series-syndromes, which have no operation indications. **Methods:** Eighty-seven qualified patients were randomized into 2 groups: the treatment group was given symptomatic treatment combined with Huatuo Zaizao Pills, Dengzhan Xixin Injection and decoction of herbal medicine, and the control group was given symptomatic treatment combined with Citicoline Injection and placebo of herbal medicine. After treatment, the neurologic score evaluated by the National Institutes of Health Stroke Scale (NIHSS), Barthel index (BI), modified Rankin Scale (mRS) score, TCM score of stroke were observed. **Results:** After treatment, the difference of the rate for NIHSS score recovering to the normal and TCM score was insignificant between the two groups ($P > 0.05$). The results of follow-up 90 days after the onset showed that the activities of daily life and mRS score in the treatment group did not differ from those in the control group ($P > 0.05$). **Conclusion:** We can not obtain the result that TCM combined with WM has a better effect than routine western medicine for acute ischemic stroke patients with Yin series-syndromes. To give the objective evaluation of Chinese medicine for acute ischemic stroke, we should enlarge the sample size, strengthen the quality control of treatment course, decrease the number of dropped-out patients and the patients failing in follow-up, and increase the adoption of patients with various syndromes.

(Original article on page 12)

Analysis of Chinese Medical Constitutions in Coronary Thrombosis Patients

PAN Chaixin(潘朝铎), WANG Qinggao(王庆高), HE Xinbing(何新兵), et al.

Abstract: Objective: To analyze the characteristics of Chinese medical constitution in patients with coronary thrombosis, thus to supply evidence for the early prevention of coronary thrombosis. **Methods:** Patients with confirmed coronary heart disease were randomized into 2 groups: 32 patients with coronary thrombosis were in the positive group, and 68 without coronary thrombosis were in the negative group. The distribution of constitution types, scores of coronary pathological changes, and levels of thromboxan B₂ (TXB₂) and von Willebrand factor (vWF) were observed. **Results:** In the positive group, the constitution of blood stasis and phlegm dampness was dominant; in the negative group, the constitution of Qi deficiency, Qi stagnation and yin deficiency was dominant ($P < 0.01$). The scores of coronary pathological changes were the highest in blood-stasis constitution, higher in phlegm-dampness constitution, and high in the constitution of Qi deficiency, Qi stagnation and yin deficiency ($P < 0.01$), so did the TXB₂ and vWF levels ($P < 0.05$ or $P < 0.01$). **Conclusion:** The constitution of coronary thrombosis patients is dominated by phlegm dampness and blood stasis.

(Original article on page 16)

Effect of Xuanbai Chengqi Decoction on Breathing Mechanics in Acute Lung Injury Patients Receiving Mechanical Ventilation

ZHANG Zhong(张忠), QIAO Qijie(乔秋杰), XIANG Suying(向素英), et al.

Abstract: Objective: To observe the therapeutic effect of Xuanbai Chengqi Decoction (XCD) on breathing mechanics in acute lung injury (ALI) patients receiving mechanical ventilation, and to explore its mechanism. **Methods:** Forty-five qualified ALI patients were randomized into the treatment group ($n=23$) and the control group ($n=22$). The two groups received routine western medicine and mechanical ventilation, and the treatment group was given XCD additionally. The changes of breathing mechanics parameters such as pressure of inspiration peak (PIP), platform pressure (Pplat), airway resistance (Raw), oxygenation index (PaO₂/FiO₂), lung compliance (Cst) and dynamic compliance (Cdyn) were observed. Meanwhile, the chest X-ray score and serum levels of inflammatory factors such as tumor necrosis factor α (TNF- α), interleukin-1 β (IL-1 β) and interleukin-10 (IL-10) were examined. **Results:** PIP, Raw, Cdyn and chest X-ray score were improved in the treatment group after treatment ($P < 0.05$ compared with those in the control group). The improvement of Pplat, Cst and PaO₂/FiO₂ in the treatment group was superior to that in the control group ($P < 0.01$). Serum TNF- α

and IL-1 β levels were decreased and IL-10 level was increased in the treatment group ($P < 0.05$ compared with those in the control group). **Conclusion:** XCD can improve the breathing mechanics in acute lung injury patients receiving mechanical ventilation, and its possible mechanism is related with the regulation of inflammatory factors.

(Original article on page 30)

Therapeutic Effect of Zushima Tablets for Undifferentiated Spinal Osteoarthritis: An Observation of 50 Cases

ZHENG Baolin(郑宝林), YU Junwen(余俊文), ZHANG Xiaojuan(张小娟), et al.

Abstract: Objective: To observe the therapeutic effect of Zushima Tablets (ZT) for undifferentiated spinal osteoarthritis. **Methods:** Eighty-three qualified patients were randomized into 2 groups: the treatment group was given ZT, and the control group was given sulfasalazine. The total therapeutic effect was evaluated after treatment. The effect on rest pain, tenderness, swelling and joint function was observed, and the safety was monitored. **Results:** In the two groups, the total therapeutic effect was similar ($P > 0.05$). And the rest pain index, joint tenderness index, joint swelling index, number of joints with tenderness or swelling, and joint function score were improved as compared with those before treatment ($P < 0.01$). The improvement of rest pain and joint tenderness in the treatment group was superior to that in the control group ($P < 0.05$). The differences of improvement of joint swelling and joint function was insignificant between the two groups ($P > 0.05$). **Conclusion:** ZT is effective and safe on relieving rest pain and joint tenderness and swelling, and on improving joint function for undifferentiated spinal osteoarthritis patients.

(Original article on page 48)

Therapeutic Effect of Acupuncture Combined with Moxa-box Moxibustion for Hunt Facial Paralysis

ZHANG Min(张敏), QIU Ling(邱玲), ZHANG Ji(张吉)

Abstract: Objective: To observe the therapeutic effect of acupuncture combined with moxa-box moxibustion for Hunt facial paralysis. **Methods:** Forty-eight qualified patients were equally randomized into the treatment group and the control group. The two groups received acupuncture. Additionally, the treatment group was given moxa-box moxibustion on the aural region of the affected side. Therapeutic effect was evaluated and the time for relieving pain was counted after treatment. **Results:** The differences of cure rate for peripheral facial paralysis and herpes zoster were significant between the two groups ($P < 0.05$), indicating that the treatment group had better therapeutic effect. The onset time for pain relief was shorter in the treatment group than that in the control group ($P < 0.01$), so did the average time for the pain relief ($P < 0.05$), indicating that the treatment group had better analgesic effect. **Conclusion:** Acupuncture combined with moxa-box moxibustion exerts certain effect for the treatment of Hunt facial paralysis.

(Original article on page 102)

Effect of Electroacupuncture on Hippocampal Neurogenesis in Epilepsy Rats

LIU Jianhua(刘建华), FU Wenbin(符文彬), XU Zhenhua(徐振华), et al.

Abstract: Objective: To observe the possible effect of hippocampal neurogenesis on electroacupuncture (EA) in treating epilepsy rats. **Methods:** Epilepsy rats models were induced with lithium chloride-pilocarpine. The frequency of spontaneous recurrent seizures (SRS) was observed after EA for 1, 3 and 4 week(s). Immunohistochemical assay was used to detect the number of neuroformative neurons with 5-bromo-2-deoxyuridine (BrdU) positive in hippocampal dentate gyrus. **Results:** Earliest SRS occurred in the survival rats at epileptic state 3 days after the onset of epilepsy. From the second week, SRS was found in the model group and EA group. After EA for 3 and 4 weeks, the frequency of SRS was reduced in EA group ($P < 0.05$ compared with the model group). The number of BrdU-positive neurons was increased in the model group one week and 3 weeks after the onset of epilepsy ($P < 0.01$ compared with the blank group), and decreased to the level of blank group from the fourth week. On the first week of EA, the number of BrdU-positive neurons was decreased, but the difference was insignificant as compared with the model group ($P > 0.05$), and then the decrease was obvious on the third week ($P < 0.05$). The number of BrdU-positive neurons in EA group arrived to the level in the model group and blank group on the fourth week of EA. **Conclusion:** EA can inhibit the hippocampal neurogenesis in the hippocampal dentate gyrus of epilepsy rats, indicating that hippocampal neurogenesis plays an important role in the therapeutic effect of EA.

(Original article on page 117)

Therapeutic Mechanism of Bushen Tongluo Prescription in Regulating Subchondral Bone Remodeling and in Protecting Articular Cartilage

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Abstract: Objective: To explore the therapeutic mechanism of Bushen Tongluo Prescription (TBP) in regulating subchondral bone remodeling and in protecting articular cartilage. **Methods:** Thirty SPF SD rats were randomized into 3 groups: sham-operation group, model group and TBP group. The rat models of osteoarthritis were induced by modified Hulth method. Four weeks after the operation, TBP was given to the rats in TBP group by gastric gavage, and the rats in other two groups were given the same volume of normal saline. Contents of proteoglycan and collagen type II in the articular cartilage were detected with immunohistochemical assay, and the morphometry of the subchondral bone was analyzed by applying criteria established by the Osteoarthritis Research Society International (OARSI) 8, 12 and 16 weeks after the operation. **Results:** OARSI score in the sham-operation group and TBP group differed from that in the model group ($P < 0.05$) 8, 12 and 16 weeks after the operation. The loss of proteoglycan and collagen type II, subchondral bone formation and sclerotin hardening were obvious in the model group compared with those in the sham-operation group. In the model group, the bone trabecula area percent, trabecula thickness, trabecula number, trabecula separation, and osteoclast number in per millimeter differed from those in the sham-operation group and TBP group ($P < 0.01$). The fluorescence perimeter percent, mineralization sedimentation rate and bone formation were lower in the model group than those in the sham-operation group and TBP group ($P < 0.01$). **Conclusion:** Subchondral bone plays an important role in the development of osteoarthritis, and TBP can prevent chondroclasis, and can delay and relieve chondropathy in osteoarthritis patients by regulating the biomechanics property of subchondral bone.

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