

证的研究

急性心肌梗塞患者阴虚病机与血浆内皮素、
一氧化氮水平的相关性研究李南夷¹ 李岳夷²

摘要 目的:研究急性心肌梗塞阴虚病机与血浆一氧化氮、内皮素水平的相关性。方法:根据中医阴虚辨证标准将98例急性心肌梗塞患者分为非阴虚组、阴虚组,后者又分为典型阴虚组与非典型阴虚组,均于发病后24~72h内清晨空腹抽取静脉血测血浆一氧化氮、内皮素水平,并与30例健康人作对照,比较各组间的差异。结果:急性心肌梗塞患者与正常组比较,血浆一氧化氮水平降低、内皮素水平升高($P<0.01$)。阴虚组与非阴虚组比较,血浆内皮素水平升高($P<0.01$),血浆一氧化氮水平差异无显著性。典型阴虚组与非典型阴虚组比较,血浆一氧化氮水平明显降低($P<0.01$),血浆内皮素水平差异无显著性。结论:急性心肌梗塞患者阴虚病机与血浆内皮素及一氧化氮水平相关。

关键词 心肌梗塞/血液 一氧化氮/血液 内皮素类/血液

阴虚是心肌梗塞急性期常见的病机之一,并对疾病短期预后产生影响^[1],交感-肾上腺素功能亢进可能是其机理之一^[2]。为了进一步了解急性心肌梗塞阴虚病机的特点,对98例患者的血浆一氧化氮、内皮素水平进行了检测,现将结果报告如下。

1 资料与方法

1.1 临床资料:急性心肌梗塞病例98例,均为住院患者。其中男性62例,女性36例,年龄37~80岁,平均年龄62岁。既往病史:有明确冠心病者70例,高血压病者56例,高脂血症者44例,糖尿病者36例。前壁或广泛前壁梗塞者53例,下壁梗塞者31例,下壁合并后壁梗塞者4例,其他部位梗塞者10例。并发各类心律失常者76例,并发不同程度泵衰竭者46例,并发心源性休克者14例。

全部病例符合急性心肌梗塞诊断标准^[3],即有胸闷或胸痛症状,持续30分钟以上,含服硝酸甘油不能缓解;有典型血清心肌酶学的改变,血清肌钙蛋白阳性;典型心电图演变。诊断明确的病例均纳入观察对

象。若有下列情况之一的病例则予排除:诊断不明确者;既往已有严重脏器衰竭者(因此次心肌梗塞所致,在观察期间出现者除外);临床资料不完整,影响分析结果者。

正常对照组30例,其中男性17例,女性13例,年龄34~68岁,平均年龄55岁。采血前经体检排除心脑血管疾病、高血压病、糖尿病、内分泌疾病等。

1.2 阴虚病机判别与分组:阴虚病机的判断参照中西医结合学会1986年制定的《中医虚证辨证参考标准》^[4]。

主症:(1)五心烦热,(2)口燥咽干,(3)舌红或少苔、无苔,(4)脉细数。次症:(1)午后潮热,(2)便结而尿短赤,(3)盗汗。具备主症3项,次症1项。按照上述标准将患者分为3组:(1)典型阴虚组:符合上述辨证标准,共15例;(2)非典型阴虚组:具备主症3项,或具备主症2项,其中包括舌红或少苔、无苔,或具备主症2项,次症1项,共34例;(3)非阴虚组:不符合上述典型阴虚和非典型阴虚标准者,共49例。以上3组年龄、性别、病史构成的差异无显著性意义,具有可比性。

1.3 检测指标与统计分析:于发病后24~72h内,清晨空腹卧位抽取静脉血,离心后取血浆于一70℃低温冰箱保存待检。一氧化氮用色谱法检测,内皮素用放射免疫法检测。

用Access数据库软件建立病例数据库。用SPSS统计软件进行方差分析、 q 检验、 t 检验等统计处理。

2 结果

附表示,急性心肌梗塞患者血浆内皮素明显升高,一氧化氮明显降低,均有显著性意义($P<0.01$)。血浆内皮素水平,阴虚组明显高于正常组和非阴虚组($P<0.01$);非阴虚组与正常组差异无显著性;阴虚组中典型阴虚组与非典型阴虚组差异无显著性意义,但两组均显著高于正常组。血浆一氧化氮水平,阴虚组与非阴虚组之间的差异无显著性,但二者均显著低于正常组($P<0.05$);典型阴虚组低于非典型阴虚组和正常组,且有显著性意义($P<0.01$);非典型阴虚组与正常组差异无显著性意义。

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附表 心肌梗塞患者阴虚病机与血浆内皮素、一氧化氮水平关系比较($\bar{x} \pm s$)

组别	例数	内皮素(pg/ml)	一氧化氮($\mu\text{mol/L}$)
正常组	30	52.7 $\pm$ 6.3	78.9 $\pm$ 12.4
心梗组	98	69.1 $\pm$ 38.0 ^{*,*}	68.4 $\pm$ 20.8 [*]
非阴虚组	49	55.98 $\pm$ 17.16	69.91 $\pm$ 20.36 [*]
阴虚组	49	81.54 $\pm$ 47.25 ^{*,*,Δ}	67.02 $\pm$ 21.37 [*]
非典型阴虚组	34	85.51 $\pm$ 58.60 ^{*,*,Δ}	72.41 $\pm$ 16.79
典型阴虚组	15	72.34 $\pm$ 38.42 [*]	54.20 $\pm$ 3.42 ^{*,*,Δ}

与正常组比较,* $P<0.05$,** $P<0.01$;与非阴虚组比较, $\Delta P<0.01$;与非典型阴虚组比较,# $P<0.01$

3 讨论

内皮素与一氧化氮是一对活性极强的血管调控因子。内皮素由血管内皮细胞所分泌,具有收缩血管、促进血管平滑肌增生、血小板聚集和细胞粘连等作用。一氧化氮由血管内皮细胞、红细胞和血小板所分泌,具有舒张血管、抗血管平滑肌增生、抑制血小板聚集、阻止细胞粘连等作用。二者作用相反,相互调控,形成血管自身调节体系,并在多种疾病的发生发展中起着重要的作用。本研究显示,急性心肌梗塞患者血浆内皮素水平显著升高,一氧化氮水平显著降低,与正常组比较均有显著性意义,这与既往研究结果一致^[5,6]。血浆内皮素水平在急性心肌梗塞后立刻升高,1~4 小时达高峰,于梗塞后当天就增加 2~3 倍,持续 3 天以上,大约 10 天后恢复基础值。血浆内皮素升高的幅度和持续时间与梗塞范围成正比^[5,7]。血浆内皮素升高和一氧化氮降低将进一步引起血管收缩,促使血小板聚集和血栓形成,加重心肌缺血和自由基损伤,对急性心肌梗塞的发展和预后产生不利影响。

阴虚是急性心肌梗塞常见病机之一,40% 以上的急性期患者存在不同程度的阴虚,并提示这类患者病情较重,预后较差^[1]。因此,对阴虚病机进行深入研究对于急性心肌梗塞的防治具有重要意义。病机研究旨在揭示疾病的变化规律。一种病理改变总是由小到大、由轻到重,由一种病理引发另一种新的病理过程。同时,临床证候也相应地存在由单一证到证候群、由不典型到典型的变化。不典型证候同样是内在病机的反映,某些具有特异性的证征的出现已能说明相应病机的存在,如神疲乏力与气虚、舌质瘀斑与血瘀等,无疑也有助于对病机的分析。诚如《伤寒论》所言“伤寒中风,有柴胡证,但见一证便是,不必悉具”。基于这一观点,本研究将急性心肌梗塞阴虚分为两组,即完全符合阴虚辨证标准者列入典型阴虚,有明显的阴虚症状而未达阴虚辨证标准者列入非典型阴虚,二者都被视为存在阴虚病机。本研究显示,在存在阴虚病机者中,典

型阴虚证者只占少数,更多的是非典型病人。对二者的比较研究有助于揭示阴虚病机的实质及其在急性心肌梗塞发病中的意义。

本研究结果显示,急性心肌梗塞血浆内皮素和一氧化氮水平的变化不仅与疾病本身有关而且与阴虚病机存在相关关系。急性心肌梗塞血浆内皮素水平升高主要发生在阴虚患者,阴虚组明显高于正常组和非阴虚组,而非阴虚组虽然亦高于正常组,但是差异无显著性意义。典型阴虚组与非典型阴虚组均高于正常组,而二者之间差异无显著性意义。这与急性心肌梗塞时血浆肾上腺素去甲肾上腺素的演变相似^[2]。血浆一氧化氮水平的变化与内皮素有所不同。急性心肌梗塞血浆一氧化氮水平降低在阴虚组和非阴虚组之间未显示出显著差异,二者均显著低于正常组。但是,在典型阴虚组与非典型阴虚组之间存在程度差异,典型阴虚组血浆一氧化氮水平降低最明显,与正常组和非典型阴虚组比较均有显著性意义。非典型阴虚组虽有降低,但与正常组比较差异无显著性。本研究结果说明,在急性心肌梗塞时血浆内皮素、一氧化氮水平变化与阴虚病机有关;并且,阴虚程度不同,内皮素与一氧化氮水平亦不同,并影响着阴虚病机的发展及患者的预后。但是,由于本研究的局限性,二者之间确切因果关系仍有待进一步的研究。

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ABSTRACTS FROM ORIGINAL ARTICLES

Effect of Acupuncture on Cerebral Blood Flow of Acute Cerebral Hemorrhage Model Rats

Zheng Jian'gang, Du Yuanhao, Shi Xuemin

Objective: To investigate dynamically change of cerebral superficial volume of blood flow in the cerebral surface of the hemorrhage hemisphere in the acute cerebral hemorrhage model rat and effects of acupuncture. **Methods:** Blood flow of the cerebral surface in the breeding hemisphere in acute cerebral bleeding model rat were investigated by laser doppler blood flow monitor in treatment group, control group and model group. **Results:** After cerebral hemorrhage, blood flow in cerebral surface decreased largely with a significant difference as compared with the normal group, control group and treatment group. Treatment group was significantly superior to control group in increase of blood flow in the local brain ($P < 0.05$). **Conclusion:** Acupuncture can significantly increase volume of blood flow in the local brain after acute hemorrhage, and arrest a series of pathological phenomena induced by local decrease of cerebral volume of blood flow to a certain extent.

Author's address: First Affiliated Hospital of Tianjin College of TCM, Tianjin 300193

Key words: Cerebral hemorrhage/acup-mox ther; local volume of blood flow/acup-mox eff

(Original article on page 666)

Effects of Integrated Therapy of TCM and WM on Clinical Symptoms in 318 Cases of SARS

Xie Yanming, Hu Jing'qing, Weng Weiliang, et al.

Objective: To compare effects of integrated treatment of TCM and WM, and simple western medicine on main symptoms in the patient of SARS. **Methods:** 524 inpatients of SARS were divided into TCM-WM integrated treatment group ($n = 318$) and western medicine treatment group ($n = 206$), and differences of improving extents of symptoms in two groups were analyzed by Kaplan-Meier existence analysis method and the Mixed statistical model. **Results:** After treatment, the decrease amplitude of the existence rate for the symptoms of weakness, short breath, dyspnea in the TCM-WM integrated treatment group was significantly lower than that in western medicine group. In the former, the duration of weakness was averagely shortened by 1.5 days, and short breath, dyspnea and muscle aching pain were averagely shortened by 2 days, one day and 2 day, respectively. **Conclusion:** The integrated treatment of TCM and WM can improve such clinical symptoms as weakness, short breath, dyspnea, etc.

Author's address: Clinical Evaluation Center, China Academy of TCM, Beijing 100700

Key words: Severe acute respiratory syndrome (SARS)/integrated therapy of TCM and WM

(Original article on page 671)

Clinical Observation on 729 Cases of AIDS Treated by TCM Syndrome Differentiation

Huang Shijing, Wei Jian'an, Cao Huiyun, et al.

Objective: To summarize clinical characteristics of AIDS and to study therapeutic effect of TCM on AIDS. **Methods:** The medical records of 729 cases of AIDS who have treated by TCM since 1989 in Tanzania are systematized and entered into computer for summarization. **Results:** The symptoms such as weakness, cough, skin rash, fever, lymphadenectasis, diarrhea and chest pain are commonly seen in the patient of AIDS, which is mainly involved in the lung and the spleen, and less in the heart, the liver and the kidney. CD4 count of T-lymphocyte subgroup is lower. **Conclusion:** TCM treatment can improve symptoms, increase immune function, particularly, when CD4 is lower than $200\text{cells}/\text{mm}^3$, the therapeutic effect is obvious.

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Key words: Acquired immunodeficiency syndrome/ diagnosis: Typing of TCM syndromes

(Original article on page 680)

Study on the Correlativity of Yin-Deficiency Pathogenesis with Plasma Endothelin and Nitric Oxide Levels in the Patient of Acute Myocardial Infarction

Li Nanyi, Li Yueyi

Objective: To study correlativity of Yin-deficiency pathogenesis of acute myocardial infarction with plasma nitric oxide (NO) and endothelin (ET) levels. **Methods:** According to differentiation criteria for TCM Yin-deficiency, 98 cases of acute myocardial infarction were divided into non-Yin-deficiency group and Yin-deficiency group. The latter was divided again into typical Yin-deficiency group and atypical Yin-deficiency group. Within 24 ~ 72h after attack, venous blood of fasting in morning was taken and plasma NO and ET levels were determined, with 30 healthy persons used as controls. **Results:** Plasma NO level decreased and ET level increased in the patient of acute myocardial infarction as compared with controls ($P < 0.01$). Plasma ET level increased in the Yin-deficiency group as compared with the atypical Yin-deficiency group ($P < 0.01$). Plasma NO level decreased in the typical Yin-deficiency group compared with the atypical Yin-deficiency group ($P < 0.01$). **Conclusion:** Yin-deficiency pathogenesis of acute myocardial infarction is correlated with plasma ET and NO levels.

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Key words: Myocardial infarction/blood: nitric oxide/blood: endothelins/blood

(Original article on page 692)