

心脏病的中医虚证分型与左心功能关系的探讨

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内容提要 通过分析 135 例不同心脏病人的 STI 三项主要参数 (PEP、LVET、PEP/LVET 值), 阐明了中医虚证分型与左心功能状态的关系。发现各虚证证型间 PEP/LVET 值在统计处理时差异最明显。此比值的增大程度依次为: 阴阳两虚证 > 气阴两虚证 > 阳虚证 > 气虚证。提示在中医辨证上反映左心功能状态者以“心之气、阳”为主。结合中医理论分析, 认为中医虚证分型可以反映出心衰的程度及预后。

近年来, 国内应用非创伤性检查的方法定量地反映左心功能状态的研究正受到重视。其中, 心脏收缩时间间期 (STI) 测定是较简便可靠的, 也是目前最常用的方法之一, 并已开始应用到心脏病中医辨证研究工作中^[1,2]。本文分析了 135 例心脏病人的中医辨证与 STI 三项主要参数检测的关系。藉以探索心血管疾病中医虚证的实质。

方法与资料

一、检测方法

对象为 1981 年以来部分住院与门诊的心脏病人 (135 例), 于上午取仰卧位, 采用 RM-45 型四导生理记录仪, 同步描记心电图、心音图、颈动脉搏动图及心尖搏动图。应用颈动脉搏动图法测量计算出 STI 各项参数, 选用电机械收缩时间 (QS₂), 左心室射血时间 (LVET), 射血前期 (PEP), 射血前期/左室射血时间 (PEP/LVET) 作为观察指标, 并以本所 1980 年测定的 107 例正常人的相应指数作为对照, 按 Weisler 法求出回归方程, 对不同心率进行了校正。

二、一般资料

本组患者中, 男性 94 例, 女性 41 例, 年龄以 40~69 岁占多数 (105 例), 最小 24 岁, 最大 76 岁。病种以冠心病与风湿性心脏病为主 (分别为 68 例与 41 例), 其次有心肌病 (7 例),

高血压动脉硬化性心脏病 (6 例), 病态窦房结综合征 (6 例), 肺源性心脏病 (4 例) 及其它心脏病 (3 例)。

临床有心衰表现的共 75 例, 其中全心衰 39 例, 左心衰 30 例, 右心衰 6 例。心衰级别属 I 级 28 例, II 级 37 例, III 级 10 例 (均属检测当时的分级)。有心衰病程记载的 72 例中, 1 年以内者 10 例, 1 年以上 10 年以内者 51 例, 10 年以上 20 年以内者 5 例, 20 年以上者 6 例。75 例患者有 45 例在检测时仍服维持量的地高辛或/和利尿剂、消心痛等药物。

三、中医辨证

按中医八纲辨证法则, 参考 1980 年全国冠心病辨证论治座谈会修订的中医辨证标准^[3], 将 135 例分为五种证型, 其中气虚证 28 例 (20.7%), 阳虚证 (包括气阳两虚证) 34 例 (25.2%), 气阴两虚证 53 例 (39.3%), 阴阳两虚证 10 例 (7.4%), 阴虚证 10 例 (7.4%)。前四种证型中临床表现为心衰者分别有 15 例、25 例、30 例与 5 例, 而阴虚组中无一例心衰。联系脏腑辨证, 前四种证型均以心或心肾虚证为主, 阴虚证则以肝肾阴虚及心肝肾阴虚为主 (均属冠心病或其它心脏病, 无风湿性心脏病者)。

检测结果

将 135 例病人之 STI 检测结果, 用指数法,

方差分析法分组进行统计学处理⁽⁴⁾, 比较了患者与正常人组的检测参数; 有心衰与无心衰病例组的检测参数(见表1、2、3), 同时将有

心衰与无心衰病例组的各项参数分别与正常人组进行了比较。

表1 135例 STI 四项参数检测结果(M±SD)

	病人组 135 例	正常对照组 107 例	P 值
QS ₂ I(毫秒)	532.12±28.56	538.10±18.80	>0.05
PEPI(毫秒)	173.23±28.12	149.27±31.38	<0.001
LVETI(毫秒)	359.59±27.85	386.36±15.93	<0.001
PEP/LVET	0.485±0.110	0.399±0.060	<0.01

表2 心衰组与无心衰组 STI 四项参数检测结果(M±SD)

项 目	心 衰 75 例	无 心 衰 60 例	P 值
QS ₂ I(毫秒)	535.13±31.17	526.38±24.83	>0.30
PEPI(毫秒)	184.93±28.06	158.51±20.44	<0.001
LVETI(毫秒)	350.53±29.92	370.92±20.09	<0.001
PEP/LVET	0.530±0.110	0.429±0.060	<0.001

表3 135例 STI 三项参数检测结果与中医证型关系分析(M±SD)

		气 虚 证	阳 虚 证	气 阴 虚 证	阴 阳 虚 证	阴 虚 证
心 衰 组	例 数	15	25	30	5	0
	PEPI(ms)	171.23±27.58	182.67±24.67	191.23±37.01	198.88±20.70	
	LVETI(ms)	360.40±31.85	356.96±29.44	345.97±25.80	317.25±24.33	
	PEP/LVET	0.481±0.09	0.519±0.10	0.557±0.11	0.627±0.05	
无 心 衰 组	例 数	13	9	23	5	10
	PEPI(ms)	159.21±16.86	150.30±21.63	162.08±23.36	161.88±26.56	154.70±12.30
	LVETI(ms)	369.96±27.05	391.85±15.41	367.99±20.11	364.41±19.97	363.50±0.70
	PEP/LVET	0.430±0.05	0.385±0.06	0.443±0.08	0.445±0.07	0.426±0.04
合 计	例 数	28	34	53	10	10
	PEPI(ms)	165.65±20.69	174.01±27.60	178.60±31.90	180.40±29.70	154.70±12.30
	LVETI(ms)	364.80±27.70	365.40±30.77	355.50±25.80	340.80±32.50	363.50±0.70
	PEP/LVET	0.458±0.08	0.484±0.11	0.507±0.11	0.531±0.11	0.426±0.04

上表结果提示, 不论病人与正常人, 心衰与无心衰, 心衰或无心衰与正常人, 各组间除QS₂I外均有显著差异(P<0.01~0.001)。心衰病例组的三项参数与正常人组之间的差异更为明显, 尤其PEP/LVET比值最能反映左心功能状态, 与Weissler及Lewis等的意见相一致^(5,6)。因此, 在分析中医辨证五种证型与左心功能关系时, 即以此三项参数作为观察对比指标。同时又将各组不同证型的PEP/LVET比值与正常人组进行了t测验, 分析检测结果提示:

1. 阴虚证之PEP/LVET比值与正常人组的差异不显著(P>0.5)说明本证与左心功能关系不明显, 且与辨证时属单纯阴虚证的病例中心衰临床表现是一致的。

2. 无心衰组中, 除气阴两虚证型外, 其它四种证型的PEP/LVET比值与正常人组之间差异均不显著(P>0.05~0.1), 而心衰组中四种证型的PEP/LVET比值与正常人组之间的差异均十分显著(P值均<0.001), 再次说明PEP/LVET比值与左心功能状态的关系密切。

3. 经方差分析, 心衰组各证型间存在显著差异(P<0.05)。PEP/LVET比值增大程度依次为: 阴阳两虚证>气阴两虚证>阳虚证>气虚证; 而无心衰组各证型之间的差异不显著(P>0.05)。

讨 论

PEPI延长, LVETI缩短与PEP/LVET比值增大这三项STI主要参数的变化可以定量

地反映左心功能状态,已为国内外所公认。尤其PEP/LVET比值最能反映左心功能状态。作者经分析135例心脏病人的STI检测值不仅再次证明上述结论,而且发现凭藉上述主要参数的变化可以说明心脏病病人虚证与左心功能间的关系。单纯阴虚证不论从临床表现或PEP/LVET比值均不能反映心功能不全,而临床辨证为气虚、阳虚、气阴两虚及阴阳两虚证者的上述参数则均有不同程度的变化。临床表现为心衰病例的变化更为突出,有显著统计学意义;各证型间亦有差别,以PEP/LVET比值对比,其增大程度以阴阳两虚证最明显,依次为气阴两虚、阳虚及气虚。由此说明在中医辨证上反映左心功能状态者以气、阳(心或心肾)为主。

根据中医理论,心之为病必伤及气、阳(心或心肾)与营阴(心或心肾或肝肾),或则气阴两伤而以耗气或伤阴为主,故心脏病临床辨证最初可以表现为单纯气虚或阴虚之证。基于阴阳互根与转化理论,阳损及阴,阴损及阳辨证关系,随着病情演变,气虚既可发展为阳虚或气阴两虚,阴虚亦可发展为气阴两虚,阳虚或阴虚亦均可发展为阴阳两虚等证,故心脏病在临床可以表现为五种证型。此中转化与心脏病种的不同似有关系。例如冠心病或高血压性心脏病等大多先见肝肾阴虚,然后由阴及气而见心气亏虚;风湿性心脏病或心肌病等则多先见心气虚或心阴虚,而后发展为气阴两虚或阴阳两虚证。

近代对阳虚证与阴虚证的研究资料分析,不论阳虚或阴虚证均有比较广泛的物质基础,在能量代谢、植物神经功能、性腺、甲状腺功能及环核苷酸等关系方面,两者呈相反作用。呈阳虚证者能量代谢、性腺、甲状腺与内脏器官的功能等均见减退,副交感神经占优势;阴虚证则与之相反,上述各项功能均见亢进,交感神经占优势,而在免疫功能及微量元素等方面则呈类似关系,但有量的差别^(7,8)。本文所进行的心脏病人左心功能检测与阴阳虚证关系的分析结果亦同样反映了上述规律性变化。因

此,不论何种心脏疾病,不论初起为气虚或阴虚,一旦出现左心功能不全,由于心肌收缩力减退,心肌能量代谢及内脏器官功能不足,血液动力学改变等种种原因,则大多呈现阳虚之证(包括气虚证在内)。若心功能进一步减退,通过人体内部自控系统的反馈调节作用,可以相反地出现阴虚证,从而在临床呈现气阴或阴阳两虚证。由此亦说明阴阳或气阴两虚证所反映的左心功能状态往往更逊于单纯气虚或阳虚证。另一方面,无心衰之心脏病病人虽亦有上述四种证型,但其STI主要参数,尤其是PEP/LVET比值大多临近正常范围。因此,临床有心衰表现的病人可以从中医辨证分型上反映出心衰的程度及预后,其辨证属阴阳俱虚或气阴两虚证时,心功能减退较明显,预后亦差;临床无心衰表现者,而中医辨证属上述二种证型时,应该考虑到有潜在心功能不全的可能。所以,我们认为将中医辨证与STI检测相结合,在一定程度上可以定性、定量地反映左心功能状态。而且STI检测可以作为辨证心脏病患者心(肾)气虚与阳虚的客观指标之一。

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Abstracts of Original Articles

Clinical and Experimental Research of *Typha Angustata* on Hyperlipidemia

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Typha angustata (TA), a commonly-used Chinese herbal drug and the chief ingredient in the ancient prescription—Shi Xiao powder(失笑散) has the action of activating blood flow and causing hemostasis. Since 1975, we have studied the effect of TA on 330 patients with Hyperlipidemia arranged at random with control group (administered with placebo and clofibrate). The results showed: (1) TA and its fat-soluble extract (A_3) can decrease triglyceride and cholesterol in the serum. Striking difference was observed between the TA, A_3 group and placebo group ($P < 0.05$). Yet no significant difference was noticed between the TA, A_3 group and clofibrate group ($P > 0.05$). (2) In the course of treatment, TA and A_3 showed no toxic side effect and thus proved better than clofibrate. In the animal experiments, A_3 not only decreased triglyceride and cholesterol but also increased high density lipoprotein cholesterol level. The experiments of acute and subacute toxicity showed that A_3 has no toxicity, which accords completely with the results of clinical observation. (Original article on page 141)

Preliminary Clinical Observations on the Treatment of Hypertension by Local Negative Pressure

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Apparatus for the treatment of hypertension by local negative pressure(LNP) on lower extremities was designed on the basis of the principle of "cupping" in traditional Chinese medicine. Its effects in clinical application were compared in 61 cases randomly divided into two groups. The results showed that the total (31 cases) effective rate of LNP group was 90.25%, while that of the control group (treated by compound hypotensor, named Fujiangpian 复降片) was 70%. Thus, there existed a statistically significant difference between the two groups. Advantages of this therapy are as follows: the method is simple and convenient; there is only mild side effect; the duration of hypotensive effect is rather long.

Determination of the physiological parameters before and after the treatment by LNP revealed that LNP can improve the parameters of cholesterol, β -lipoprotein and triglyceride in a wide range. Therefore, the results indicated that negative pressure on extremities can regulate the physiological function of human body due to the disorder of neuro-hormonal regulation.

It is considered that there are various receptors in skin and the stimuli (such as physical and chemical factors, including medicaments) acting on skin can be transmitted from various parts of the body to the pallium and viscera. So that the functions of viscera, vital energy and blood and body fluid are enabled to reach a new dynamic equilibrium, and endocrine and metabolic functions of the human body are returned to normal physiological condition. Perhaps it is one of the important factors accounting for the hypotensive effect of the LNP therapy, which helps improve the subjective symptoms of the patients. (Original article on page 145)

Study of the Relationship Between TCM Typology of Deficiency Syndrome and Left Ventricular Functional Performance in Patients with Cardiac Disease

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Through analysing the three main parameters of systolic time intervals (STI) (PEP, LVET and PEP/LVET) in 135 patients with various cardiac diseases, we have studied the relationship between the TCM typology of deficiency syndrome and left ventricular functional performance. The 3 chief values in the group with cardiac failure were markedly different from those of the normals and the group without cardiac failure as control ($P < 0.01 \sim 0.001$), the increase in PEP/LVET reflecting fully the degree of left ventricular dysfunction. The values of PEP/LVET of all the deficiency types but the simple deficiency of Yin in the group with cardiac failure were all greater than those of the normal control ($P < 0.001$). Furthermore, there was also statistic difference in PEP/LVET between the 4 deficiency types ($P < 0.05$). The rise of PEP/LVET value was in the following order: deficiency of Yin and Yang > deficiency of Qi and Yin > deficiency of Yang > deficiency of Qi. However, no similar difference was found in the group without cardiac failure ($P > 0.05 \sim 0.1$). Therefore, according to differential diagnosis of syndrome in TCM, it is the state of Qi and Yang of heart that is responsible for the changes of left ventricular functional performance. Deficiency of both Qi and Yin, or deficiency of both Yin and Yang, usually brings an even worse case of left ventricular dysfunction than deficiency of Qi or Yang alone. So according to the authors, classification of deficiency syndromes might be of value in estimating the degree of left ventricular dysfunction and prognosis of patients with cardiac disorders.

(Original article on page 148)