

证的研究

冠心病血瘀证血液理化特性与中医证型相关性研究

丘瑞香* 罗致强* 朱雅宜* 秦 鉴*

摘要 目的:探讨血瘀证的证型实质。方法:检测 216 例冠心病血瘀证患者高切速全血粘度(η_{HB})、低切速全血粘度(η_{LB})、血浆粘度(η_P)、红细胞聚集指数(AI)、红细胞压积(HCT)及血清总胆固醇(CH)、甘油三酯(TG)、血浆纤维蛋白原(Fb)、前列环素(PGI_2)、血栓素(TXA_2)的浓度。结果:气滞血瘀组 η_{LB} 、AI 显著升高, PGI_2/TXA_2 明显下降,血液呈高聚状态;阴虚血瘀组 CH、HCT、Fb、AI、 η_{LB} 明显增高,血液呈高浓、高凝、高聚状态;痰浊血瘀组 η_{LB} 、 η_P 、TG 显著升高,血液呈高粘状态;气虚血瘀组仅 η_{HB} 有所升高,其他指标变化不明显。结论:提示血瘀证的不同证型有不同的生化物质基础,血液理化特性变化与中医证型关系密切。为血瘀证进一步分型论治提供了实验依据。

主题词 冠状动脉疾病/血液 血瘀/血液 辨证分型

血瘀证实质的综合研究表明,血瘀证患者血液具有浓、粘、凝、聚的倾向,血液的高凝状态是血瘀证病理变化的重要环节。在提高活血化瘀药物疗效的临床研究中,如何结合血液不同理化特性进行中医分型论治的报道尚少见。本研究以冠心病血瘀证患者为对象,试图通过相关血液理化指标的检测与分析,探讨血瘀证血液理化特性与中医辨证分型的相关性。阐明血瘀证不同证型的生化物质基础,为血瘀证进一步分型论治和活血化瘀药物的配伍使用提供实验指标和理论依据。结果报告如下。

1 材料与方法

1.1 临床资料:按 WHO 标准及血瘀证诊断标准^[1,2],确诊冠心病血瘀证患者 216 例,均为我院住院或专科门诊病人。男 101 例,女 115 例,年龄 45~75 岁,平均 56.5 岁。急性心肌梗塞 25 例,陈旧性心肌梗塞 38 例,稳定型心绞痛 113 例,不稳定型心绞痛 40 例,其中合并高血压病 65 例,糖尿病 30 例。对照组 30 例,男 16 例,女 14 例,年龄 30~50 岁,平均 42.5 岁,均为无内脏实质性病变的健康人。

1.2 方法

1.2.1 观察指标及测定方法:(1)参照文献^[3,4],用上海医科大学 XN-5 型毛细管粘度计,肝素抗凝,空

腹静脉采血 5ml,测定高切速($80s^{-1}$)、低切速($20s^{-1}$)、全血液比粘度(分别表示为 η_{HB} 、 η_{LB})和血浆比粘度(η_P);(2)红细胞聚集指数(AI):参照 Dinterfassl 法计算, $AI = \eta(20s^{-1})/\eta(80s^{-1})$;(3)红细胞压积(HCT):用 Wintrobe 管法;(4)血浆纤维蛋白原(Fb):用盐析双缩脲显色法;(5)前列环素(PGI_2)、血栓素(TXA_2):采用苏州医学院血栓与止血教研室提供的 TXA_2 、6-酮-前列环素 $F_{1\alpha}$ (6-Keto- $PGF_{1\alpha}$)放射免疫分析药盒,测定方法按药盒说明书,由中山医科大学放免中心操作;(6)血脂:血清总胆固醇(CH)、甘油三酯(TG)按常规方法进行。

1.2.2 血瘀证分型:参照冠心病中医辨证标准和中医虚证辨证参考标准^[5,6]划分,气滞血瘀组 68 例(男 32 例,女 36 例);气虚血瘀组 75 例(男 36 例,女 39 例);阴虚血瘀组 40 例(男 16 例,女 24 例);痰浊血瘀组 33 例(男 15 例,女 18 例)。

1.3 统计方法:测定指标皆以 $\bar{x} \pm s$ 表示,显著性测试用团体 t 检验。

2 结果

不同证型血瘀证患者血液理化指标比较:附表示,与对照组比,气滞血瘀组 η_{LB} 、AI 升高非常显著(P 均 < 0.01), PGI_2/TXA_2 显著下降($P < 0.05$),血液呈高聚状态;阴虚血瘀组 η_{LB} 、HCT、AI、Fb、CH 增高非常显著(P 均 < 0.01),血液呈高浓、高凝、高聚状态;痰浊血瘀组 η_{LB} 、 η_P 、TG 增高显著($P < 0.05$ 或 $P < 0.01$),血液呈高粘状态;而气虚血瘀组仅 η_{HB} 有所升高($P < 0.05$),其他指标变化不明显($P > 0.05$)。

3 讨论

中医学认为,气滞血瘀多属于肝气疏泄异常所致的一种病理改变,气滞是因,血瘀是果。本实验结果表明,气滞血瘀证血液呈高聚状态,揭示了气滞的实质及其与血瘀的关系。我们在冠心病微循环障碍与气病致瘀的研究中发现,气滞血瘀证的微循环严重障碍,主要表现在红细胞的聚集性显著增高^[7],与须惠仁等的研究结果^[8]——疏肝理气药能非常显著降低血小板的聚集率相吻合,进一步证实了气滞的病变基础与红细胞及血小板聚集性的增强,从而导致全血粘度的增高,流

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附表 血瘀证辨证分型与血液理化因素的关系($\bar{x} \pm s$)

项 目	正常对照组(30 例)	气滞血瘀组(68 例)	气虚血瘀组(75 例)	阴虚血瘀组(40 例)	痰浊血瘀组(33 例)
η LB(r)	7.89 $\pm$ 0.96	9.42 $\pm$ 1.14**	8.34 $\pm$ 0.97	8.76 $\pm$ 1.08**	8.53 $\pm$ 1.04*
η HB(r)	5.96 $\pm$ 0.53	6.22 $\pm$ 0.81	6.31 $\pm$ 0.76*	6.26 $\pm$ 0.85	6.28 $\pm$ 0.79
η P(r)	1.76 $\pm$ 0.07	1.79 $\pm$ 0.14	1.77 $\pm$ 0.08	1.80 $\pm$ 0.11	1.86 $\pm$ 0.15**
HCT(%)	0.45 $\pm$ 0.03	0.46 $\pm$ 0.07	0.44 $\pm$ 0.05	0.49 $\pm$ 0.06**	0.46 $\pm$ 0.06
AI	1.33 $\pm$ 0.05	1.52 $\pm$ 0.11**	1.32 $\pm$ 0.07	1.39 $\pm$ 0.10**	1.35 $\pm$ 0.09
Fb(g/L)	2.5 $\pm$ 0.8	2.60 $\pm$ 0.9	2.40 $\pm$ 0.8	3.20 $\pm$ 1.0**	2.70 $\pm$ 0.9
CH(mmol/L)	4.6 $\pm$ 1.5	4.90 $\pm$ 2.0	4.70 $\pm$ 1.9	6.70 $\pm$ 2.7**	5.30 $\pm$ 2.2
TG(mmol/L)	1.32 $\pm$ 0.79	1.64 $\pm$ 0.91	1.49 $\pm$ 0.81	1.69 $\pm$ 0.87	2.02 $\pm$ 0.98**
PGI ₂ /TXA ₂	0.19 $\pm$ 0.05	0.16 $\pm$ 0.07*	0.18 $\pm$ 0.06	0.18 $\pm$ 0.07	0.17 $\pm$ 0.08

与对照组比较,* $P<0.05$,** $P<0.01$

变性的降低,出现循环障碍有关。因此如何有效增加红细胞表面电荷,促进 PGI₂ 的合成或抑制 TXA₂ 的代谢和血小板表面活性,是治疗气滞血瘀证的主要途径之一。

气虚血瘀证与其他 3 证相比,其血液理化特性的变化并不十分显著。据临床观察,具典型浅紫舌的气虚血瘀患者,血液理化指标常未见明显改变,局部血瘀症状与血瘀证“高凝”状态并不完全一致。这与气虚血瘀证机体功能特别是心脏功能低下,外周微血管异常变化,导致微循环障碍,外周血流抗阻增大有关。提示对气虚血瘀证的治疗,如何加强心血管功能,以促进血液循环,显得更为重要。气滞血瘀与气虚血瘀同为气病,但其血液理化特性却有显著差异,反映血瘀证的发病有阶段性和时相性,前者是处于血瘀证形成或发作的急进阶段,血液处于“高凝”状态,表现出标本俱实证候;后者处于血瘀证发作或形成后的暂缓阶段,血液处于“低凝”或正常状态,表现出标本俱虚证候。提示从中医自身规律出发,结合血液理化特性的分析,有助于对血瘀证本质及其治疗机制的理解。

阴虚血瘀证血液呈高浓、高凝、高聚状态,因本证血液粘滞性增大,流变性降低,聚集性增强,凝固性增高,以及它们间的相互作用,易使血栓形成,引起血管栓塞。有报道心肌梗塞患者比未病者 Fb 水平明显增高^[9],其它凝血指标则未见差异,我们在临床中也发现属阴虚血瘀证患者较其他患者易于发生脑中风和心肌梗塞,是否可认为在血瘀证的证型中,阴虚血瘀证是最为危险的一种,Fb 的异常增高可理解是阴虚血瘀证实实验室指标所持有的特征,加强阴虚血瘀证的临床研究在心脑血管疾病的防治中有其特殊意义。

痰浊血瘀证的血液呈高粘稠状态,中医学有“痰瘀同源”。“痰瘀同病”之说,痰证在发病机理、临床症状等方面均有密切的内在联系,血脂增高和脂蛋白的异常与中医学的“痰浊”有关,而血脂增高和脂蛋白的异常又常并发血液流变学的异常,共同构成心脑血管疾病

的危险因素。在血液中的“高粘”与痰湿的“重浊”相互作用下,血液流变性降低,导致痰湿成瘀。对痰浊血瘀证的治疗,除痰降脂化浊与活血化瘀药的应用显得同等重要,如何通过除痰降脂化浊以促进瘀血的消除值得进一步研究。

血瘀证的不同证型集中反映了血瘀证不同血液理化特性及其病理学基础,同时也说明气虚、气滞、阴虚、痰浊等因素在血瘀证的发病过程中起着重要作用,提示益气、理气、养阴、化痰、祛湿等药物与活血化瘀药的相互配伍对血瘀证的治疗将起协同的作用。

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ABSTRACTS FROM ORIGINAL ARTICLES

Clinical study on treatment of 30 cases of systemic lupus erythematosus with Hong Ban Decoction

Su Xiao, Hong Qiang, Xia Jing, et al.

30 cases of systemic lupus erythematosus (SLE) were treated with Hong Ban Decoction and other 30 cases were mainly treated with prednisone as controls. Hong Ban Decoction in eliminating proteinuria, improving blood picture and serositis, and reducing complications was superior to the control group, suggesting that Hong Ban Decoction has such pharmacologic actions as anti-vasculitis, regulating abnormal immunological function and decreasing inflammatory exudate. The total effective rate for a half year was 93.33% in the treatment group and 86.67% in the control group with no significant difference between the two groups ($P > 0.05$). Three years later, the total effective rate (87.5%) in the treatment group was superior to that (58.62%) in the control group ($P < 0.05$). It is suggested that the therapeutic effect of Hong Ban Decoction is better than prednisone in the long-term effect.

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Key words: Erythematosus, systemic/TCM therapy, @Hong Ban Decoction

(Original article on page 359)

Study on correlativity of blood physical and chemical properties with TCM syndrome types in the patient of coronary heart disease with blood stasis syndrome

Qiu Ruixiang, Luo Zhiqiang, Zhu Yayi, et al.

Objective: To probe into essence of syndrome types of blood stasis syndrome. **Methods:** High shearing whole blood viscosity (η_{HB}), low shearing whole blood viscosity (η_{LB}), plasma viscosity (η_P), aggregation index of erythrocyte (AI), hematocrit (HCT) and levels of serum total cholesterol (CH), triglyceride (TG), plasma fibrinogen (Fb), prostacyclin (PGI_2), thromboxane (TXA_2) were determined in 216 cases of coronary heart disease with blood stasis syndrome. **Results:** η_{LB} and AI increased and PGI_2/TXA_2 ratio decreased significantly in the group of stagnation of Qi and stasis of blood, showing high aggregation state of blood; CH, HCT, Fb, AI and η_{LB} increased significantly in the group of blood stasis due to Yin-deficiency, showing high concentration, high agglutination and high aggregation state of blood; η_{LB} , η_P and TG increased significantly in the group of stagnation of phlegm and blood, showing high viscosity state of blood; only η_{HB} had some increase in the group of Qi-deficiency and blood stasis. **Conclusion:** Different syndrome types of blood stasis syndrome

have different biochemical material base, and changes of blood physical and chemical properties are closely related with TCM syndrome types, which provides an experimental basis for treatment of subtypes of blood stasis syndrome.

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Key words: Coronary artery diseases/blood, blood stasis/blood, types of syndrome

(Original article on page 378)

Effects of tonifying the liver and kidney method on levels of sexual hormones and metabolism of blood lipids in the patient of postmenopausal coronary heart disease

Wang Xiubao, Zhang Jiqing, Wang Wenchuan, et al

Objective: To approach to correlativity of levels of sexual hormones with coronary heart disease (CHD) of postmenopausal women and metabolism of blood lipids, and effects of tonifying the liver and kidney method. **Methods:** 60 postmenopausal women with CHD were randomly divided into Chinese drug group and western drug group, 30 cases each group. They were respectively treated with tonifying the liver and kidney method and Nylestriol for 6 months, and 30 health subjects were used as control group, and their blood estradiol (E_2), total cholesterol (TC) and low density lipoprotein-cholesterol (LDL-C) levels were determined before treatment and 3, 6 months after treatment. **Results:** (1) E_2 level in the CHD group was significantly lower than that of the control group ($P < 0.01$); (2) E_2 level increased gradually ($P < 0.01$), and LDL-C and TC levels decreased significantly ($P < 0.05$) after treatment for 6 months in the Chinese drug group, with no significant difference as compared with the western drug group ($P > 0.05$); (3) E_2 level increased and TC level decreased after treatment for 6 months in the Chinese drug group, the both showed a significantly negative correlation ($r_1 = -0.905$, $P < 0.01$); E_2 and LDL levels also showed significantly negative correlation ($r_1 = -0.909$, $P < 0.01$; $r_2 = -0.912$, $P < 0.01$). **Conclusion:** Attack of postmenopausal female CHD is related with decrease of female hormone levels. Tonifying the liver and kidney therapy is good for protecting the heart and blood vessels, and it is one of effective methods for prevention and treatment of postmenopausal female CHD.

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Key words: Coronary artery diseases/TCM therapy, tonifying the liver and kidney, sexual hormones/metabolism

(Original article on page 380)