

补气活血药治疗气虚血瘀型心力衰竭的临床观察

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内容提要 52例气虚血瘀型心力衰竭患者中, A组8例作气囊漂浮导管监测血液动力学, 在推注黄芪或滴注黄芪与丹参后, 心脏指数等均明显增加; B组44例在滴注丹参2周后, 临床心功能、气虚证与血瘀证分级均有改善, 在加用黄芪2周后则有进一步改善, 高切率的全血比粘度、纤维蛋白原及血小板聚集功能等血液流变学指标均明显降低。

为了进一步研究气血相关理论, 我们分别或联合应用丹参、黄芪注射液, 通过临床观察探讨补气药与活血药的作用差别以及有无协同作用。

资料与方法

一、病例选择: 本组52例, 均按全国中西医结合虚证学术会议(1982年广州)和全国中西医结合活血化瘀学术会议(1982年上海)有关气虚、血瘀的诊断标准分成二组。A组8例, 男7例, 女1例; 平均年龄 59.1 ± 11.7 (40~74)岁; 其中6例为急性心肌梗塞, 2例为冠心病伴左心衰竭, 均作气囊漂浮导管检查与血流动力学监测。B组44例, 男28例, 女16例, 平均年龄 64.6 ± 10.0 (40~83)岁, 并按其严重程度依次分为气虚证I、II、III级及血瘀证I、II、III级。其中冠心病42例, 原发性扩张型心肌病1例, 风湿性心脏病二尖瓣病变1例。

二、方法

1. A组通过左上肢贵要静脉插入7F4腔气囊漂浮导管, 分别测得右房压、右室压、肺动脉收缩压(PASP)、肺动脉舒张压(PADP)、肺动脉均压(PAMP)及肺楔压(PWP); 在快速推注 0°C 生理盐水10ml后, 通过心排量计算机测出心排量(CO)、每搏量(SV)、心脏指数(CI)及

每搏指数(SI)。分别推注丹参注射液8g、黄芪注射液8g、党参与黄芪注射液各8g后, 分别于15与60分钟时测定上述血流动力学指标。静脉滴注丹参与黄芪注射液每24小时各24g, 共72小时后复测血流动力学指标。导管检查中停用一切正性肌力或扩血管西药。

2. B组应用XD-30三道心电图机同步作心电图、心音及颈动脉搏动图, 测定收缩时间间期(STI), 算出射血前间期与左室射血时间的比值(PEP/LVET)。应用XN₃血粘细胞电泳自动计时仪, 测定血细胞压积, 纤维蛋白原、全血比粘度、血浆比粘度、红细胞电泳时间及血沉等血液流变学指标。应用PAM-2型PPP自动平衡血小板聚集仪测定 θ 角、最大聚集力及30秒聚集力等由 $2\mu\text{mADP}$ 诱导的血小板聚集功能。44例每日静脉滴注丹参24g, 2周后每日静脉滴注丹参与黄芪各24g, 共4周为一疗程。每例治疗前后分别作上述项目的测定。

结 果

一、A组8例注药前后血流动力学改变: 见表1。

结果表明补气药可增加心排量, 改善心功能, 与活血药合用则作用更显著。

STI测定: 丹参能使PWP稍下降, 黄芪能

表1 A组注药前后血流动力学的改变 (M±SD)

		CI(L/min/m ²)	CO(L/min)	SV(ml)	SI(ml/m ²)
丹参	推注前	3.09±0.94	5.16±1.23	62.13±18.69	37.63±12.95
	15分钟	3.31±0.90	5.48±1.25	67.75±18.71	40.38±11.35
	60分钟	3.38±0.58	5.73±1.01	69.75±17.68	41.63±10.62
黄芪	推注前	3.07±0.74	5.17±1.20	64.69±20.26	39.32±14.06
	15分钟	3.60±0.89	6.08±1.68	74.88±19.48*	44.82±11.49*
	60分钟	3.77±0.82**	6.38±1.50**	76.26±21.72*	45.60±13.33*
党参 + 黄芪	推注前	3.04±0.34	5.15±1.12	61.50±21.57	37.61±11.36
	15分钟	3.63±0.74*	6.10±1.25*	72.25±16.85*	43.25±10.87*
	60分钟	3.34±0.42	5.63±0.62	64.63±14.11	38.63±9.40
丹参 + 黄芪	静滴前	2.75±0.12	4.72±0.38	57.00±14.52	33.83±8.70
	72小时	3.37±0.14***	5.67±0.68**	69.50±13.19**	40.67±8.16*

*P<0.05 **P<0.01 ***P<0.001

稍升高PWP,丹参加黄芪能使PASP稍下降,但未达显著差异;党参加黄芪能明显增快心率。

二、B组治疗前后情况

1. 治疗前后心功能、气虚证、血瘀证分级的变化: 单用活血药丹参治疗2周后, 心功能改善1级有20例; 加用补气药黄芪治疗2周后, 心功能改善1级有16例, 改善2级1例。同样, 用丹参2周后, 气虚证改善1级8例, 血瘀证改善1级23例, 2级1例; 在加用黄芪

2周后, 气虚证改善1级21例, 2级1例, 血瘀证改善1级14例, 2级1例。44例在丹参和丹参加黄芪治疗各2周后, 心功能、气虚证及血瘀证分级情况均有明显改善。

STI测定: 治疗前PEP/LVET为0.44±0.13, 治疗2周后为0.40±0.12(P>0.05), 4周后为0.39±0.11(P>0.05), 与临床心功能改善相平行。

2. 治疗前后血液流变性的变化: 见表2。

表2 治疗前后血液流变性变化 (M±SD)

	血球压积 (%)	纤维蛋白原 (mg%)	全血比粘度(比)		血浆比粘度 (比)	红细胞电泳 时间(s)	血沉 (mm/h)
			低切率	高切率			
治疗前	38.30±6.03	521.84±198.4	6.14±1.52	4.25±0.65	1.66±0.09	20.76±3.12	27.98±16.10
丹参2周后	37.77±5.33	457.84±110.73	5.62±1.14	4.07±0.61	1.62±0.12	20.01±2.58	26.11±16.08
丹参+黄芪2周后	37.73±5.45	431.30±89.01**	5.60±1.33	3.90±0.64*	1.62±0.12	20.44±3.24	24.18±15.68

*P<0.05 **P<0.01

表3 治疗前后血小板聚集功能的改变 (M±SD)

	θ角	最大聚集力(%)	30秒聚集力(%)
治疗前	71.22±7.75	75.17±21.15	47.17±18.58
丹参2周后	66.22±9.05*	56.70±21.71**	32.57±17.72
丹参+黄芪2周后	65.09±10.37*	58.78±24.86*	32.30±18.98

*P<0.05 **P<0.01

表2可见丹参加黄芪能明显降低纤维蛋白原及高切率的全血比粘度。

3. 治疗前后血小板聚集力的改变: 见表3。

表3可见丹参及丹参加黄芪均能明显降低血小板聚集功能。

讨 论

气血之关系是互相资生、相互维系的, 气能

摄血,血能载气。我们通过放射性核素锝(^{99m}Tc)作单探头平衡法测定左室射血分数,发现气虚型心肌梗塞患者的心功能明显差于无气虚者。而通过应用补气中药(黄芪、党参),可明显改善心功能,并能使异常的血液流变学指标得到改善^[1],提示补气药能增强心脏收缩功能,加速血液循环。表明中医的“气为血帅”,气为推动血液运行动力的理论是客观存在的。

冠心病患者,尤其是伴有心力衰竭者,中医辨证大多属于气虚血瘀型,其心衰严重度与气虚证、血瘀证的分级大致平行。北京地区已报道了应用益气活血方药或注射液能有效治疗冠心病及急性心肌梗塞^[2,3],益气活血方不仅对急性心肌梗塞伴低血压、休克、心力衰竭等并发症具有一定防治作用,而且能降低早期病死率,改善部分患者的预后。

本文资料表明丹参注射液能稍降肺楔压与肺动脉收缩压,黄芪注射液稍升肺楔压与肺动脉收缩压,丹参加黄芪注射液降低肺动脉收缩压,但未达显著性差异。

丹参、黄芪,尤其是黄芪加党参注射液能明显增快心率,提示补气中药的强心作用不仅包括正性肌力作用,尚包括正性变时性作用。

本文A组8例的漂浮导管测定结果示活血药丹参注射液不能明显增加心排量与每搏量,而与黄芪合用则能明显增加心排量与每搏量。

在B组44例静脉滴注丹参2周及丹参加黄芪2周后,亦显示两者合用可减小PEP/LVEF比值,改善心功能,减轻临床气虚证严重程度。此充分提示活血药丹参与补气药黄芪有协同作用,丹参能增强黄芪的补气强心作用。

补气药黄芪与活血药丹参亦有协同作用。血液流变学指标测定结果显示丹参能降低B组病例的全血比粘度(高切率)及血浆比粘度,而丹参加黄芪注射液则能明显降低全血比粘度及纤维蛋白原,此外能明显降低血小板聚集功能。由此可见补气中药可与活血中药协同,明显改善异常的血液流变学指标及降低血小板聚集功能,补气药黄芪能增强活血药丹参的活血化瘀作用。

从本文资料可见补气中药黄芪与活血中药丹参具有协同作用,既增强了补气强心作用,又增强了活血化瘀作用,充分反映与验证了中医的气血相关理论,并为今后临床上应用补气活血药治疗各种气虚血瘀型心脏病患者提供了依据。

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Use of Qi(气)-Replenishing and Stasis-Removing Herbs in Treating Patients with Heart Failure of Qi(气)Deficiency and Blood Stasis Type

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There were 52 cases with heart failure of Qi deficiency and blood stasis type. Group A consisted of 8 cases monitoring cardiac hemodynamics by Swan-Ganz catheter. After intravenous injection of *Astragalus membranaceus*, *Codonopsis pilosula* and *Astragalus*, and *Salvia miltiorrhiza*, the cardiac index, cardiac output, stroke volume and stroke index were increased in the former two groups, but not after *Salvia* injection. Group B consisted of 44 cases which was given intravenous dripping of *Salvia* (24 gm / day) for 2 weeks, then added injection of *Astragalus* (24 gm / day) for 2 weeks. After therapy not only the clinical cardiac performance, PEP / LVET, severity of Qi deficiency and blood stasis were improved. Besides, the platelet aggregation function was markedly inhibited. According to experimental study of contraction curves of isolated papillary muscle of rabbits' heart, the results showed that *Astragalus* had positive inotropic effect and *Salvia* had no such effect. The synergistic effect of these two herbs can be demonstrated. The results of clinical and experimental study indicated that *Astragalus* and *Salvia* have synergistic effect. So the article supports the traditional theory of correlation between Qi and blood.

(Original article on page 591)

Influence of Changshouling (长寿灵) on Immune Functions in Atherosclerosis Patients

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The influence of Changshouling, a patent drug composed of Chinese herbal drugs, on immune functions in 50 cases with atherosclerosis (As) was reported. The results indicated that there were disturbances of immune functions in the As patients. The contents of circulatory immune complex (CIC) in serum were markedly higher than those of the normal control ($P < 0.001$). Meanwhile, the levels of C₃, the antibody dependent cell-mediated cytotoxicity (ADCC) activity of NK cell and the percentage of E-rosette forming cells were markedly lower than those of the normal control ($P < 0.001$). The immuno-disturbances restored to normal levels following one-month treatment with Changshouling. These results indicated the Changshouling played an important role in adjusting the immunodisturbances in patients with As and suggested that Changshouling is a satisfactory immuno-adjusting medicine.

(Original article on page 594)

An Observation on the Effect of Pearl Layer Powder on Serum LPO and Lipids in CHD Patients

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Group A, 20 cases of coronary heart disease (CHD) treated with pearl layer powder (PLP) for the observation of the effect on serum LPO and lipids, while 17 cases of CHD using placebo only for control group (B). Group A treated with PLP showed significant reduction of serum LPO after administration of a course (1 month) of PLP ($P < 0.01$), but group B using placebo showed no significant effect ($P > 0.05$). There was significant difference between two groups treated with X² test. There was no significant difference on serum lipids including total cholesterol, triglyceride and HDL-ch. The authors suggested that PLP might have certain preventive effect on coronary heart disease.

(Original article on page 596)

404 Mixed Hemorrhoid Patients Treated with External Excision and Internal Separation with High Ligation

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According to the main principles of Milligan's Hemorrhoidectomy integrated with the TCM method of high ligation of internal hemorrhoid, 404 cases of mixed hemorrhoid were treated. 320 were male and 84 female. This new therapy applied from 1967 to 1985 was proved to be simple, practical, and the operation time was shortened. It caused less pain, few complications, and only one operation instead of staged operations were necessary. There were 278 cases with mixed hemorrhoid, 49 wreath shaped mixed hemorrhoid, 44 complicated with anal fissure, 18 with ano-fistula, 15 with hypertrophy of anal papillae and 15 cases with previous hemorrhoidectomy history. Operation procedure: It consists of external hemorrhoidectomy, separation of internal hemorrhoid with high ligation at its pedicle, and local infiltrative injection with "procaine methylene blue". Postoperative complications such as urine retention, pain, difficulty in defecation