

青紫舌与前列腺素关系的探讨

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内容提要 用放射免疫法测定了具有青紫舌体征的血瘀患者血浆前列腺素 A_2 、 E_1 及 $F_{2\alpha}$ 的含量。结果发现,血瘀症患者血浆 PGA_2 含量均明显低于正常人。文中认为测定血浆中 PGA_2 含量对判断青紫舌血瘀症的程度及观察疗效有一定意义。

在中医学的望诊中,青紫舌是血瘀症的主要见证之一。鉴于前列腺素(PGs)对机体各种组织细胞起着精微调节的作用,因而测定青紫舌患者血浆PGs的含量可能对中西医理论的结合点及青紫舌发生的原因的探讨有一定意义。本文采用放射免疫法测定了正常人及血瘀症患者血浆 PGA_2 、 PGE_1 及 $PGF_{2\alpha}$ 的含量,现将结果报告如下。

研究方法

一、青紫舌病人的选择与分组:根据1982年全国第一次中西医结合活血化瘀学术会议制定的血瘀症诊断试行标准,选择具有明显青紫舌表现的血瘀症患者28例作为血瘀症总体组。又依据西医诊断,将该28例血瘀症总体组患者分为冠心病组11例,肺心病组12例,红斑狼疮组5例,并同时测定了38例不同年龄的正常人作为对照组。

二、PGs的提取及放射免疫测定:血浆中 PGA_2 、 PGE_1 及 $PGF_{2\alpha}$ 的提取、分离和放免测定方法见我们以前的报道⁽¹⁾。

实验结果

正常人及血瘀症患者血浆中 PGA_2 、 PGE_1 及 $PGF_{2\alpha}$ 含量见表1。

从表1可以看出,各血瘀组(包括血瘀症总体组及肺心病、冠心病、红斑狼疮各分组)血浆 PGA_2 平均含量均明显低于正常组;血浆

中 PGE_1 除肺心病组明显高于正常组($P<0.01$)外,其余各组(包括血瘀总体组)均增高不明显($P>0.05$);血浆 $PGF_{2\alpha}$ 含量,各血瘀组与正常组差别不显著。

表1 血瘀症患者与正常人血浆PGs含量比较 ($M\pm SE$)

组别	例数	血浆中含PGs量(pg/ml)		
		PGA_2	PGE_1	$PGF_{2\alpha}$
正常组	38	$1,842\pm 93$	453 ± 45	704 ± 28
血瘀症总体组	28	$1,221\pm 115^{**}$	579 ± 54	633 ± 68
血瘀肺心病组	12	$1,403\pm 194^*$	$704\pm 78^{**}$	661 ± 125
血瘀冠心病组	11	$1,139\pm 192^{**}$	476 ± 77	645 ± 102
血瘀红斑狼疮组	5	$946\pm 58^{**}$	502 ± 138	543 ± 21

**与正常组相比 $P<0.01$ *与正常组相比 $P<0.05$

表2 血瘀组与正常组不同性别血浆PGs含量比较 ($M\pm SE$)

组别	性别	例数	血浆中PGs含量(pg/ml)		
			PGA_2	PGE_1	$PGF_{2\alpha}$
正常组	男	18	$2,010\pm 101$	425 ± 53	711 ± 42
	女	20	$1,691\pm 145$	478 ± 71	698 ± 38
血瘀组	男	15	$1,358\pm 172^{**}$	604 ± 78	737 ± 92
	女	13	$1,064\pm 131^{**}$	548 ± 74	513 ± 92

**与正常组比较 $P<0.01$

由于血浆 PG_s 含量可随性别不同而有所增减, 为了防止因性别差异而影响组间对比, 故把血瘀症总体组与正常组按不同性别分组比较, 结果见表2。

从表2可以看出, 在正常组与血瘀组内 PGA_2 、 PGE_1 及 $PGF_{2\alpha}$ 水平虽略有不同, 但相互之间无明显差别 ($P>0.05$); 在正常组与血瘀组之间, 血浆 PGE_1 及 $PGF_{2\alpha}$ 差别不显著, 但血瘀组血浆中 PGA_2 含量则无论男女均明显低于相应的男女正常组。

讨 论

中医学认为血瘀症是由于“血脉不通”“血行失度”引起的“积血”、“蓄血”之症, 而青紫舌是血瘀辨证中一个主要见证。最近研究表明^[2], 血瘀证可能是与体内血液循环、特别是微循环障碍以及血栓形成有关的病理过程。有人比较有无青紫舌体征患者在血液流变学方面的变化时发现, 青紫舌患者(包括肺心病及红斑狼疮等血瘀症患者)中血流的粘度及聚化程度和血液中 IgG、IgA 含量均高于正常人; 而冠脉血流量、脑血流量及淋巴细胞转化率则比正常人下降。临床观察与实验研究也证实, 在冠心病、肺心病及红斑狼疮等血瘀症患者的外周循环中常有明显的红细胞聚集现象, 无论是球结膜微循环、手指甲皱微血流或舌乳头血管丛中的微血流都可以从正常的线状或带状变成絮状、粒状或虚线状。这一切说明, 血瘀病人不但有各种形式的全身或局部循环障碍, 而在血浆分子生物形态学方面也有变化。

PG_s 在体内分布广、活性强, 其对体内所有器官组织都起有调节作用^[3~5]。从我们的报告中也可看出, 血瘀患者血浆中 PGA_2 、 PGE_1 及 $PGF_{2\alpha}$ 的变化是不一致的, 其中 PGA_2 与正常人相比下降显著。鉴于 PGA_2 是作用很强的血管活性物质, 其能直接扩张冠状动脉, 降低其阻力, 促使血液流动, 且可扩张外周小动

脉, 使血流量增加, 是较强的血管舒张剂^[4]。特别是由于 PGA_2 不在肺内代谢, 只在肝内分解, 故作用时间长, 可象一般激素那样在血液内循环^[6], 所以血瘀症患者血浆中 PGA_2 含量明显减少可能是导致微循环紊乱的原因之一。

最近研究表明^[2], 青紫舌血瘀症患者用活血化瘀药物治疗能使临床症状改善, 使青紫舌减轻。静脉注射10%川芎注射液(10ml/kg)可使家兔球结膜微循环与软脑膜循环的血流速度加快。我们以往的研究^[1]也证明: 甘油致急性肾功能衰竭(ARF)的家兔, 在肾血流量下降的同时, 肾髓质内 PGA_2 含量也明显减少; 而当用川芎预防时, 在肾髓质 PGA_2 含量明显增加的同时肾血流量也明显增加。由此说明 PGA_2 含量改变对血液动力学的影响是明显的。可以推测, 血瘀症患者血浆中 PGA_2 降低与体内各种形式血流量降低可能有关, 值得今后进一步探讨。

鉴于青紫舌血瘀症患者血浆中 PGA_2 含量明显下降, 故测定血浆中 PGA_2 含量对判断青紫舌血瘀症的程度及观察疗效有一定意义, 可作为辅助诊断的客观指标之一。

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Analysis of 60 Cases of AMI Tongue Feature

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This paper expounds the analysis of 60 cases of acute myocardial infarction (AMI) tongue feature. Preliminary results showed that AMI tongue feature has certain characteristics and developing patterns. In general, the tongue coats which developed from flimsy→thick→yellow→black indicated unfavourable prognosis, while those developed from black→yellow→thick→flimsy indicated favourable prognosis. The thin white coats usually appeared in the early and recovery stage of AMI. Among the 60 cases, we observed there were 22 cases (36.7%) of thin white coats on the first day of admission and 32 cases (53.4%) in the second week after admission. If the thin white coats appeared during the whole course of AMI, the case condition would not be considered serious, complications would be less and the prognosis would be better. There were 16 cases (26.7%) with yellow slimy coats on the first day of admission. Along with the AMI development, the yellow slimy coats increased to 22 cases (36.7%) and 20 cases (33.4%) on the third day and in one week after admission respectively. If the yellow slimy coats appeared continuously, the prognosis would probably turn worse.

Furthermore, AMI patients with yellow slimy coats were usually accompanied with constipation, therefore the herbs for cleaning phlegm-dampness and relaxing bowel should be given so as to help repair AMI.

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Correlation Between Color of the Tongue Substance and Hemodynamics, Hormones of Adrenal Cortex and Medulla in Hypertensive Patients

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Inspecting the substance of the tongue is an important means for diagnosis and treatment in traditional Chinese medicine. 101 cases of hypertensive patients were studied with the substance of the tongue observed and hemodynamic and biochemical indices determined at the same time for contrasting.

1. The 101 hypertensives were divided into four groups according to the color of their tongue substance as the group with red tongue, light red tongue, pale tongue, and dark red tongue, and designated as Group A, B, C and D respectively.

2. The heart rate (HR) of Group A (75.70 ± 11.26 per minute) (mean \pm SD) was the highest, while that of Group C (69.54 ± 7.59 per minute) was the lowest. Cardia index (CI) of Group A (4.22 ± 1.20) was the highest, while that of Group C (3.40 ± 0.92) was the lowest. And CI of Group B (4.14 ± 1.45) was higher than that of Group C and Group D (3.56 ± 1.40). SBP of Group D (167.64 ± 19.82 mmHg) was the highest while that of Group C (158.62 ± 17.63 mmHg) was the lowest. TPR of Group D (1927.40 ± 193.41 dyn/sec/cm⁻⁵) was the highest while that of Group A (1443.93 ± 436.59 dyn/sec/cm⁻⁵) was the lowest. PEP/LVET of Group D (0.3854 ± 0.0756) was the highest while that of Group A (0.3462 ± 0.0741) the lowest.

3. VMA, 17-OH, 17-KT of Group A are 10.95 ± 6.43 mg per day, 9.74 ± 5.84 mg per day, 8.61 ± 2.82 mg per day respectively, all being the highest of the four groups while those of Group C are 5.45 ± 2.71 , 5.42 ± 2.82 , and 7.01 ± 2.77 all being the lowest except 17-KT.

4. These findings indicated that the red tongue group reflects increasing cardiac output while the pale tongue group reflects increasing total peripheral resistance, and that the sympatho-adrenergic system activity and hypothalamic-pituitary-adrenal axis activity are found greater in red tongue group than in pale tongue group. Therefore, this observation suggests that hypertensive patients with different colors of substance of the tongue reveal different pathogenetic patterns.

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A Study on the Relations of Cyanotic Tongue to Prostaglandins

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The plasma PGA₂, PGE₁ and PGF_{2α} levels in patients with cyanotic tongue were studied by radio-immunoassay. The results showed that plasma PGA₂ levels in patients with blood stasis were lower than normal subjects. This indicates that the measurement of plasma PGA₂ may be of significance for judging the degree of blood stasis and the effects of treatment.

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