

高血压病患者舌质同血流动力学及肾上腺皮质、髓质激素的关系

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内容提要 101 例高血压病患者按舌质变化分为红绛、淡红、淡白、紫暗四组,同时测定血流动力学和生化指标。四组中红绛舌组心率和心脏指数最高而外周阻力和 PEP/LVET 最低;淡白舌组心率、心脏指数、收缩压最低;紫暗舌组收缩压、外周阻力及 PEP/LVET 最高。尿 VMA、17-OH、17-KT 值均以红绛舌组最高,淡白舌组除 17-KT 外,属最低值。本文结果提示不同舌质的高血压病患者具有不同的病理学模式。

舌象是中医辨证论治的一个重要客观指标。近年来一些学者通过临床观察,认为舌象的改变可作为机体循环功能、特别是微循环状态的一个较敏感指标。我们从血流动力学和生化指标上对不同舌质的高血压病患者进行了对照观察,以探索其间的关系和病理学基础。

对象和方法

一、研究对象:101 名高血压病患者,其中男 46 例,女 55 例,年龄 32~65 岁,病程 1~25 年。经观察舌质属红绛者 20 例,淡红舌 26 例,淡白舌 24 例,紫暗舌 31 例。

二、方法:全部患者在安静状态下测定心率、血压,同时用阻抗心动图与颈动脉搏动图法描记测定心脏指数(CI)、心收缩力指数(HI)、血管总外周阻力(TPR)、射血前期/左室射血时间(PEP/LVET)等项指标;并收集 24 小时尿液测定 3 甲氧-4 羟基苦杏仁酸(VMA)、17 羟皮质类固醇(17-OH)、17 酮皮质类固醇(17-KT)。

结 果

不同舌质与血流动力学、生化指标之间的关系,见表 1、2。

表 1 不同舌质患者血流动力学测定结果的比较 (M±SD)

组 别	HR (次/分)	CI	HI	SBP (mmHg)
红绛舌组	75.70±11.26 ^{△△}	4.22±1.20 ^{△△△}	15.38±4.10	165.80±18.18
淡红舌组	73.34±14.88	4.14±1.45 ^{△△}	16.99±7.15	162.34±17.91
淡白舌组	69.54±7.59	3.40±0.92	14.95±4.84	158.62±17.63
紫暗舌组	72.64±9.52	3.56±1.40	14.55±5.94	167.64±19.82 [△]

组 别	DBP (mmHg)	TPR dyn/s/cm ⁻⁵	PEP/LVET
红绛舌组	97.85±9.41	1,443.93±436.59 ^{△△△*}	0.3460±0.0741*
淡红舌组	97.80±12.60	1,485.03±614.84 ^{△△}	0.3570±0.0669
淡白舌组	97.58±10.93	1,849.79±623.76	0.3566±0.0577
紫暗舌组	102.12±11.56	1,927.40±793.41	0.3854±0.0756

注: △系与淡白舌组相比 P<0.05, △△系与淡白舌组相比 P<0.025, △△△系与淡白舌组相比 P<0.01

*系与紫暗舌组相比 P<0.05, **系与紫暗舌组相比 P<0.025, ***系与紫暗舌组相比 P<0.01

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表2 不同舌质患者尿VMA、17-OH、17-KT测定结果的比较(M \pm SD)

组 别	VMA mg/日	17-OH mg/日	17-KT mg/日
红绛舌组	10.95 \pm 6.43	9.74 \pm 5.84	8.61 \pm 2.82
淡红舌组	7.82 \pm 2.33 $\Delta\Delta$	7.52 \pm 7.05	7.07 \pm 2.65*
淡白舌组	5.45 \pm 2.71***	5.42 \pm 2.82***	7.01 \pm 2.77***
紫暗舌组	7.66 \pm 3.64 Δ	6.53 \pm 4.90**	6.55 \pm 1.77***

注: Δ 系与淡白舌组相比 $P<0.01$, $\Delta\Delta$ 系与淡白舌组相比 $P<0.0025$

*系与红绛舌组相比 $P<0.05$, **系与红绛舌组相比 $P<0.025$,

***系与红绛舌组相比 $P<0.01$

讨 论

自从1957年Widimsky发现高血压患者的高心输出量——正常外周阻力型后,已为许多学者所证实。有人推测高心输出量可能因 β 受体活力增强,或交感神经及 β 受体活力增强而副交感神经活力减弱,或血容量增加所致。并且指出高心输出量型又可转变为高外周阻力型⁽¹⁾。从本文结果来看,红绛舌组的安静心率、心脏指数均高于其它三组,而总外周阻力低于淡白舌组及紫暗舌组;淡白舌组安静心率、心脏指数均低于其它三组,但总外周阻力高于红绛舌及淡红舌组;紫暗舌组的总外周阻力、收缩压、舒张压均高于其它三组。因而从不同舌质上似可反映出高心输出量和高外周阻力亚型的存在。红绛舌组反映着高心输出量型而淡白舌和紫暗舌可反映高外周阻力型。从祖国医学角度上看,红绛舌是阴虚火旺或阳亢的舌象,而淡白舌是阳虚、气虚的舌象。曾有学者提出高血压病的病程可能有阳亢 \rightarrow 阴虚阳亢 \rightarrow 阴虚 \rightarrow 阴阳两虚 \rightarrow 阳虚等几个转化阶段⁽²⁾。这也似与从高心输出量型向高外周阻力型转化的过程相符。

为了进一步探讨红绛舌的高心输出量和淡白舌、紫暗舌高外周阻力的背景,我们测定了尿VMA、17-OH、17-KT。其结果显示红绛舌组三项生化指标均高于淡白舌及紫暗舌组。据国内文献报道,阴虚火旺患者尿儿茶酚胺排泄量显著高于阳虚患者,而阳虚患者尿17-OH水平显著下降^(3,4)。从而显示阴虚火旺患者交感神经功能可能增强,而阳虚患者垂体—肾上腺皮

质功能低下。从本文结果来看,作为反映阴虚火旺指标的红绛舌组的尿VMA、17-OH、17-KT均明显高于反映阳虚证的淡白舌组,可能说明红绛舌组交感神经—肾上腺髓质系统及垂体—肾上腺皮质系统功能均高于淡白舌组,与上述文献报道相一致,也与我们的血流动力学结果相吻合。

目前已有大量证据表明原发性高血压患者的交感神经活性异常。Cousineau等报道血儿茶酚胺增高的高血压患者具有心率快、心肌收缩力增强等特点⁽⁵⁾。Wallace等近来报道青年高血压患者交感神经活性增强是引起高血压的因素,并且发现他们的兄弟姐妹中的正常血压个体似乎具有与高血压病患者相似的交感神经活性改变的生物化学和血流动力学证据⁽⁶⁾。

本观察结果,具有较高尿VMA、17-OH、17-KT排泄量的红绛舌组其心输出量也较高,而尿VMA、17-OH、17-KT较低的淡白舌组其心输出量较低,但总外周阻力较高,从而显示出不同舌质的高血压患者在生化指标和血流动力学方面有着不同的模式和病理学基础。

综上所述,舌质不仅是中医学辨证论治的重要指标,而且对研究机体功能尤其是循环功能的生理病理变化具有重要意义。

参 考 文 献

1. 上海高血压研究所:《高血压病》第49页,上海科学技术出版社,1978
2. 郭士魁等:关于高血压病中医分型的讨论。中医杂志 34, 1960
3. 上海中医学院:阴虚火旺与肾上腺皮质、髓质激素关系的初步探讨。上海中医药杂志 5:8, 1979
4. 上海第一医学院脏象研究室:肾阳虚病人下丘脑、垂体、肾上腺皮质系统功能的观察。上海中医药杂志(复刊号):21, 1978
5. Cousineau D, et al: Circulating catecholamines and systolic time intervals in labile sustained hypertension. Clinical Science and Molecular Medicine 55, Suppl 4:65 S, 1978
6. Wallace W, et al: Blood pressure, heart rate, and plasma catecholamines in normal and hypertensive children and their sibling at rest and after standing. Hypertension 4(4):507, 1982

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.

(Original article on page 212)

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.

(Original article on page 214)

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.

(Original article on page 216)