

· 临床论著 ·

脾阴虚证植物神经机能状态初探

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内容提要 本文报告运用生理、生化、放射免疫等方法对30例脾阴虚证患者进行了多指标观察。发现其唾液淀粉酶活力差正值的阳性率(42%)和血浆cAMP/cGMP比值(1.57 ± 0.71)低于健康人组($P < 0.01$)，AchE活力($212 \pm 43u$)高于健康人组($P < 0.01$)；颞髻、劳宫穴皮温分别为 $32.89 \pm 1.71^{\circ}C$ 和 $34.16 \pm 1.33^{\circ}C$ ，均高于健康人组($P < 0.01$ 和 $P < 0.05$)。用慎柔养真汤治疗后，上述指标有不同程度的改善。同时还探讨了脾阴虚证与植物神经功能间的关系。

本文报告对30例脾阴虚证患者的植物神经机能状态进行了初步观察，并与脾气虚组进行对照，现将结果报告如下。

资料与方法

一、诊断标准：脾阴虚证：按我科自订标准^①，脾气虚证：根据中医虚证辨证参考标准^②进行诊断。

二、分组：脾阴虚组30例，男性13例、女性17例；年龄20~65岁，平均40岁。病程1年以内10例，1~5年14例，6~10年5例，10年以上1例。主要病种有消化性溃疡、胃肠神经官能症、原发性白细胞减少症、舌乳头炎、慢性肠炎和功能性微热。脾气虚组23例，男性10例、女性13例；年龄23~62岁，平均38岁。病程1年以内9例，1~5年7例，6~10年7例。病种除无舌乳头炎外，其余同脾阴虚组。

健康人组60名，男性25名、女性35名；年龄19~67岁，平均41岁。来自本地区体检普查健康人群，选择中医辨证无异常所见者。

三、观察方法：各组分别测定下列指标：

1. 唾液淀粉酶活力差：按广州中医学院方法^③测定受试者酸刺激前后唾液淀粉酶活力。凡酸刺激后酶活力上升者，活力差为正值，反之为负值。观察各组正值的阳性率。

2. 红细胞胆碱酯酶(AchE)活力：参照全血胆碱酯酶比色法改进测定。酶活力单位：1ml红细胞酶溶液在37℃孵育20分钟内分解

1μmol乙酰胆碱为1个单位。

3. 血浆cAMP、cGMP含量：放射免疫法测定。药箱由上海第二医科大学提供。

4. 皮温测定：用ST-I型数字式体温仪在室温20~23℃条件下，测定受试者上午空腹安静状态时的皮温。测试部位：膻中、气海、右侧颞髻、内外劳宫、足三里及三阴交。

四、治疗方法：脾阴虚证17例，用慎柔养真汤为主方治疗。药物：党参、白术、茯苓、山药、莲肉、黄芪、白芍、麦冬各10g，炙甘草5g，五味子3g，水煎每日1剂，分2次口服，1个疗程(30天)后复查，进行治疗前后自身对照。

结 果

一、唾液淀粉酶活力差：脾阴虚组检测24例，酶活力差正值者10例(42%)；脾气虚组20例中3例为正值(15%)；健康人组20名中18例为正值(90%)。脾阴虚组正值的阳性率低于健康人组($P < 0.01$)，但高于脾气虚组($P < 0.05$)。15例脾阴虚患者治疗前后自身对照：酶活力差正值的阳性率由6/15上升到12/15，差异有显著性意义($P < 0.05$)。

二、AchE活力测定：脾阴虚组显著高于健康人组，但低于脾气虚组，各组对比见附表。17例脾阴虚证患者自身对照：AchE活力治疗前为 $210 \pm 45u$ ($M \pm SD$ ，下同)，治疗后下降到 $188 \pm 19u$ ，治疗前后对比，差异有显著性意义($P < 0.05$)。

三、血浆cAMP、cGMP含量：脾阴虚组

cAMP 低于健康人组 ($P < 0.05$), 但与脾气虚组差异无显著性意义; cGMP 高于其他两组; cAMP/cGMP 则低于其他两组 (P 均 < 0.01), 各组对比见附表。9 例患者自身对照: 治疗前 cAMP 为 $16.59 \pm 2.96 \text{ pmol/ml}$, cGMP 为 $12.23 \pm 5.05 \text{ pmol/ml}$, cAMP/cGMP 为 1.64 ± 0.80 ; 治疗后分别为 $17.57 \pm 3.39 \text{ pmol/ml}$ ($P > 0.05$)、 $9.67 \pm 3.40 \text{ pmol/ml}$ ($P < 0.05$) 和 2.11 ± 1.05 ($P > 0.05$)。

四、皮温: 7 个测定点中, 脾阴虚组颧髻和内劳宫穴皮温显著高于健康人组。经相关分析处理, 发现脾阴虚证穴位皮温升高与患者的烦热、口干唇燥、舌红少苔症状呈正相关。相关系数颧髻为 0.53 ($P < 0.01$), 劳宫为 0.76 ($P < 0.01$)。

13 例脾阴虚患者皮温治疗前后分别为: 颧髻 $33.05 \pm 2.07^\circ\text{C}$ 、 $31.70 \pm 1.43^\circ\text{C}$, 劳宫 $34.05 \pm 1.53^\circ\text{C}$ 、 $33.10 \pm 1.07^\circ\text{C}$, 两者对比差异均有非常显著意义 (P 均 < 0.01)。脾气虚组此两穴皮温却低于健康人组 ($P < 0.01$), 尚见外劳宫、足三里、三阴交三穴皮温降低 ($P < 0.05$)。其结果见附表。

附表 各组 5 项观察指标的对比 ($M \pm SD$)

组别	AchE (u)	cAMP (pmol/ml)	cGMP	cAMP/ cGMP	皮温 ($^\circ\text{C}$)	
					颧髻穴	劳宫穴
脾阴虚	212 ± 43 (30)	16.83 ± 2.95 (15)	12.58 ± 4.64 (11)	1.57 ± 0.71 (11)	32.89 ± 1.71 (25)	34.16 ± 1.33 (25)
脾气虚	242 ± 41 (23)	16.75 ± 4.44 (15)	7.13 ± 2.06 (12)	2.74 ± 0.96 (12)	30.90 ± 1.46 (15)	32.34 ± 1.78 (15)
健康人	178 ± 36 (40)	21.22 ± 6.43 (10)	6.88 ± 1.98 (10)	3.69 ± 1.56 (10)	31.84 ± 1.66 (60)	33.32 ± 1.61 (60)

注: () 内为例数, 脾阴虚组与脾气虚组比较 $*P < 0.01$, 脾气虚组与健康人组比较 $**P < 0.05$, 脾阴虚组与健康人组比较 $\Delta P < 0.05$, $\Delta\Delta P < 0.01$

讨 论

一、脾阴虚证与植物神经功能的关系: 中医“脾”本质的研究, 国内已做了不少工作。由

于消化系统主要受植物神经支配, 因此许多单位从观察植物神经机能状态着手, 探讨脾虚本质, 取得了可喜的进展。

一般认为 AchE 平行地反映了体内乙酰胆碱 (Ach) 的水平。Ach 在外周是副交感神经的化学递质。cGMP 则参与胆碱能神经元之间的突触传递。这两项指标间接地反映了副交感神经的兴奋性。本文脾阴虚证 AchE 及 cGMP 均见升高, 提示副交感神经机能偏亢。但本症唾液淀粉酶活力差正值的阳性率下降, 又表明副交感神经的应激能力低下。

cAMP 是含氮激素和去甲肾上腺素能神经元信息传递的第二信使。当交感神经兴奋、儿茶酚胺增多时, 可通过与靶细胞 β 受体结合, 使 cAMP 生成增多。脾阴虚证血浆 cAMP 降低, 在一定程度上反映了机体交感神经兴奋性低下。

脾阴虚证颧髻、劳宫穴皮温升高, 推测与副交感神经机能亢进及支配体表血管的交感神经张力降低导致体表血管扩张有关⁽⁴⁾。

二、脾阴虚、脾气虚与植物神经功能的相互作用: 脾气虚证的 AchE 活力、血浆 cAMP 含量及唾液淀粉酶活力差改变, 与脾阴虚证一致, 但皮温改变相反。提示副交感神经机能亢进(但应激能力降低)是两证的共性, 而在皮肤血管反应方面, 两证则处于相反的病理状态。联系脾阴虚证与脾气虚证在植物神经机能方面的改变, 推测: 副交感神经机能亢进是“运化失司”这一脾虚共同病机的部分客观病理学基础; 而皮温改变, 则可能是脾阴虚证“阴虚内热”和脾气虚证“温煦失司”病机的客观反应。

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参 考 文 献

1. 贝叔英, 等. 皮温测定对脾阴虚证诊断价值初探. 中医杂志 1987; 28(4):54.
2. 沈自尹整理. 中医虚证辨证参考标准. 中西医结合杂志 1983; 3(2):117.
3. 广州中医学院脾胃研究组. 脾虚患者唾液淀粉酶活性初步观察. 中华医学杂志 1980; 60(5):290.
4. 孙廷魁, 等. 植物神经系统基础与临床. 第1版. 上海: 上海科学技术出版社, 1981: 251—258.

Abstracts of Original Articles

Study on Functional State of Autonomic Nerve in Spleen Yin Deficiency Syndrome

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By means of physiology, biochemistry and radioimmunoassay, 30 patients with Spleen Yin(阴) deficiency syndrome (SYDS, 脾阴虚证) were studied. The results suggested that there were following changes in the SYDS patients: (1) In 10 out of 24 patients (42%), the activity of salivary diastase increased when stimulated by citric acid, the positive rate in this group was lower than that in the normal control ($P < 0.01$), but higher than that in patients with Spleen Qi(气) deficiency syndrome (SQDS, 脾气虚证), ($P < 0.05$). (2) The activity of AchE of erythrocyte in 30 SYDS patients was 212 ± 43 u, it was higher than that in the control ($P < 0.01$) but lower than that in SQDS patients ($P < 0.01$). (3) cAMP/cGMP ratio of plasma in 15 SYDS patients was 1.57 ± 0.71 , which was significantly lower than that in the control and SQDS patients ($P < 0.01$). (4) The skin temperature of Quanliao (SI18) and Laogong (P8) in 25 patients were $32.89 \pm 1.71^\circ\text{C}$ and $34.16 \pm 1.33^\circ\text{C}$ respectively, which were significantly higher than that in the control. In 17 SYDS patients, Shenrou Yangzhen decoction(慎柔养真汤) was used. After a treatment course all the above-mentioned laboratory findings improved in various degrees. The results suggested that there were hyperfunction of parasympathetic nerve and a lowering of sympathetic nerve excitability in the SYDS patients. There is a close internal relation between this change and SYDS.

(Original article on page 202)

Clinical Application of Moist Exposure Therapy of Burn

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Moist exposure therapy of burn was used locally. It applied the ointment of Chinese traditional drugs. It promoted the blood circulation and relieved the stasis which enabled the necrotic layer of wound to liquefy and discharge. The burn recovered in the humid surroundings. It could promote and regulate the growth of the residual epithelial and fiber tissue, and ensure the skin to grow naturally to the deep wound of second degree burn which would heal scarlessly. The natural healing of the mixed degree would be expected also. The frequency of the ointment applying was not restricted, but the thickness of the ointment layer should be thinner than 1 mm which was sufficient for the moistening of the burn wound. The recovery of 120 patients whose maximal burn area was 50%, with 40% deep wound was reported. Compared with the dry exposure therapy of burn, the moist exposure therapy of burn has good efficacy of relieving the pain and shortening the healing period. Their average healing time was superficial II grade healed in 7.12 ± 0.62 days, deep II grade healed in 18.23 ± 2.14 days, the rate of infection was 2.5% only. Out of 68 burn patients of deep wound, only 2.9% needed grafting. The rate of scar was only 41.18%.

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D-S Mixture in Treating Hyper-Hemoviscosity State in Nephrotic Syndrome

and Analysis of Its Therapeutic Effects

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In this paper, hemorheological test of 77 nephrotic syndrome (NS) patients and 27 healthy people was carried out, and the results proved that the hyper-hemoviscosity state usually accompanied NS. Two groups were formed: the treated group and the control group, and the 77 NS cases were allocated to these two groups randomly. The treated group used D-S mixture (*Duchesnea indica* and *Shutellaria barbata*, prednisone and cyclophosphamide, while the control group used prednisone and cyclophosphamide only. The clinical data of these two groups were the same and comparable. The course of treatment was two months. Results: Each item of the hemorheological parameters of the treated group improved significantly ($P < 0.05 \sim 0.01$), while that of the control group, on the contrary, the blood viscosity even increased ($P < 0.05$). The rate of sustained remission of the treated group reached 71.1% and the total effective rate was 84.4%, while the control group was 40.6% and 59.4% respectively. The above observations revealed that the D-S mixture could not only detoxify and