

# 虚证(气虚、阴虚)患者外周血淋巴细胞酸性酯酶的变化及其意义

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**内容提要** 本文报告对 71 例虚证(气虚、阴虚)患者(包括肝炎后肝硬化、溃疡病、急性胰腺炎、急性胃肠炎)进行外周血淋巴细胞酸性酯酶(ANAE)检查,并检查 120 例正常健康者 ANAE 作为对照组。结果气虚组 50 例 ANAE 阳性率为  $38.60 \pm 4.83\%$ , 阴虚组其阳性率较气虚组更低,为  $33.19 \pm 6.79\%$ , 两组均明显低于正常对照组 ( $54.32 \pm 6.50\%$ ), 有显著差异 ( $P < 0.01$ )。并探讨了虚证与机体细胞免疫功能低下的关系及其临床意义。

本文对不同的消化系统疾病如肝炎后肝硬化、溃疡病、急性胰腺炎及急性胃肠炎等患者表现虚证(气虚、阴虚)见证者,进行外周血 Acida-Naphthyl Acetate Esterase (简称 AN-AE)检查,以研究虚证患者 ANAE 的变化,部分患者同时做免疫球蛋白、E-玫瑰花环(简称花环)、淋巴母细胞转化率(简称淋转)试验,以探讨虚证与免疫的关系。

## 材料与方法

一、病例选择:本组共 71 例,男性 44 例,女性 27 例;年龄:最小者 17 岁,最大为 76 岁,以 40~50 岁发病率为最高。其中气虚组 50 例,阴虚组 21 例。两组中肝炎后肝硬化 27 例,肝癌 1 例,慢性活动性肝炎 7 例,均经临床、肝功能试验及有关生化检查证实。胃、十二指肠球部溃疡 18 例,均经 X 线钡餐摄片和纤维胃镜检查证实。急性胰腺炎 9 例(血、尿淀粉酶明显升高),及急性胃肠炎 9 例。另 120 例不同年龄的正常健康者,做 ANAE 检查,作为对照组。

二、检查方法:取手指血制成均匀薄片,以 ANAE 染色法进行染色,以显微镜油浸镜检 100 或 200 个淋巴细胞,酯酶的形态在细胞质中呈点状棕褐色反应,凡在细胞质中有 1~

3 颗棕褐色斑点者为阳性细胞,即 T 淋巴细胞,无此斑点者为阴性细胞。计数 100 个淋巴细胞中所见的阳性细胞的百分数,即为 T 淋巴细胞的阳性率。

此外,对 20 例肝炎后肝硬化虚证患者在 ANAE 检查的同时分别做免疫球蛋白、花环及淋转试验,以观察虚证患者这些免疫指标的变化。

## 三、中医辨证与疾病种类

气虚组:本组共 50 例,其中包括肝炎后肝硬化 17 例,慢性活动性肝炎 2 例,胃、十二指肠球部溃疡 15 例,急性胰腺炎 7 例,急性肠炎 9 例。这些不同疾病患者均表现不同程度气虚见证,如神疲乏力,气短懒言,面色萎黄或㿗白,易自汗,腹胀纳呆,大便溏薄,尿清或少,舌苔薄或稍腻,舌质淡胖,边有齿痕,脉弱或无力。

阴虚组:共 21 例,其中肝炎后肝硬化 10 例,慢性活动性肝炎 5 例,肝癌 1 例,胃、十二指肠球部溃疡 3 例,急性胰腺炎 2 例。患者多数表现形体消瘦,口干喜饮,咽燥,怕热,五心烦热,心烦易激动,盗汗多梦,舌少苔或苔剥脱,舌质红或有裂纹,脉弦细。

## 结 果

一、健康人外周血 ANAE 检查结果:120

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例正常健康人, 年龄 20~60 岁, 结果正常人的 ANAE 阳性率为  $54.32 \pm 6.50\%$ 。

二、气虚与阴虚组 ANAE 检查结果: 气虚组与阴虚组患者外周血 ANAE 均较正常对照组为低, 气虚组阳性率 ( $M \pm SD$  下同) 为  $38.60 \pm 4.83\%$ , 而阴虚组其阳性率更低, 为  $33.19 \pm 6.79\%$ , 均显著低于正常对照组 ( $54.32 \pm 6.50\%$ ), 两组与对照组比较均有显著差异 (气虚、阴虚组与正常组比较,  $t$  值分别为 15.4、13.65,  $P$  值均  $< 0.01$ )。气虚组与阴虚组相比较, 阴虚组 ANAE 阳性率低于气虚组, 两组之间亦有显著差异 ( $t$  值为 3.8,  $P < 0.01$ )。

三、其他免疫指标测定结果: 11 例肝炎后肝硬化气虚者免疫球蛋白 IgG、IgA 平均值分别为  $2898.73 \text{ mg\%}$  与  $513.27 \text{ mg\%}$ , 明显高于正常值 ( $760 \sim 1660 \text{ mg}$  与  $71 \sim 335 \text{ mg\%}$ ), 而 IgM 于正常范围; 9 例阴虚患者 IgG 为  $2004.57 \text{ mg\%}$ , IgA 为  $490 \text{ mg\%}$ , 较气虚组为低, 但亦偏高于正常值。11 例气虚与 9 例阴虚者花环及淋转均在正常范围。

## 讨 论

Mueller<sup>[1]</sup>首次报告 ANAE 活性是小鼠 T 细胞的特征, 而 B 细胞阴性。近年来利用细胞化学方法来区分 T、B 淋巴细胞, 特别是以 ANAE 染色来检查人外周血 T 淋巴细胞, 并证明此种酶标记染色阳性的细胞即是参与细胞免疫的 T 细胞<sup>[2,3]</sup>。T 淋巴细胞为胸腺依赖性细胞, 由骨髓生成的淋巴细胞经胸腺素的作用而成为参与细胞免疫的 T 淋巴细胞, 在人体免疫监视系统中以 T 细胞为主的细胞免疫对机体防御和控制疾病具有重要作用<sup>[4]</sup>。

本文结果表明, 在不同疾病表现气虚、阴虚见证的患者中外周血 ANAE 阳性率明显低于正常对照组, 阴虚组较气虚组下降更为显著, 说明不同病种表现虚证者外周血 T 淋巴细胞减少, 反映了这些虚证患者机体细胞免疫功能低下。由此可见, 不同疾病而出现同证 (气虚或阴虚虚证), 表现出一系列气虚或阴虚症

候群, 可能与机体的免疫功能, 尤其是细胞免疫功能下降有关。本组中某些慢性疾病如慢性肝病、溃疡病等表现虚证者, ANAE 均低于正常, 这可能由于病程较长, 久病则体虚, 故免疫功能低下。然而本组中急性病例如急性胰腺炎、急性肠炎表现虚证者, 也显示该酶的阳性率降低, T 细胞减少。这进一步说明虚证患者机体以 T 细胞为主的细胞免疫防御机能下降, 外邪则容易乘虚而入, 以致发病。此与祖国医学中“正气内存, 邪不可干”, “邪之所凑, 其气必虚”之理论相一致。说明虚证出现与机体免疫水平, 尤以细胞免疫功能低下有密切关系。有人研究各种扶正益气养阴药, 有增强机体免疫功能, 加强体内网状内皮系统吞噬能力和促使白细胞增加作用。亦说明补气养阴药之所以能治疗虚证, 可能也是由于调整和恢复机体的免疫功能而实现的。

本组在同一种疾病的部分虚证患者在做 ANAE 染色的同时, 做免疫球蛋白、花环、淋转检查, 结果这些虚证患者免疫球蛋白平均值均高于正常, 以 IgG 为明显, 显示虚证 T 细胞下降而 B 细胞功能亢进现象。但部分气虚与阴虚患者花环、淋转都在正常范围, 而 ANAE 则明显低于正常。说明在虚证患者中该酶似更能反映细胞免疫功能水平下降。但由于花环、淋转检测病例较少, 尚有待进一步研究比较。总之, 上述研究结果对虚证治疗中调整机体免疫功能, 特别是恢复和提高细胞免疫功能均具有重要的临床意义。

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## Abstracts of Original Articles

### A Clinical Study of the Effect of Essence-Restoring Decoction on Retarding Aging Process

#### — A Report of 62 Cases

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This paper presents the effect of a kidney tonifying Chinese medicine "Essence-Restoring Decoction" on retarding the process of aging. Clinical indices such as immune function, lung volume, ventilation function, serum creatinine, near visual acuity, grip strength, anti-nuclear antibody (ANA), rheumatoid factor (RF), and X-raying of the right femur for measurement of the periosteum index have been adopted. Duration of treatment is one year. The assessment of the therapeutic effect is based on the integration of the survival time of mice (Kunming breeding) and silkworms fed with this decoction. Post-treatment mean value shows that the indices of lymphocyte transformation, activated T lymphocyte, total complement,  $C_3$ , IgG, vital capacity, maximal ventilation capacity, near visual acuity, grip strength, periosteum index in presenile and senile stages all have a rise. ANA turns to negative. The presenile stage residual volume/total lung capacity ratio and one second expiratory volume have reduced. The senile stage IgM rises, IgA and alternative pathway complement are reduced. The other laboratory estimates maintain the same level as one year before. The rise of lymphocyte transformation, presenile stage  $C_3$ , senile stage IgM and vital capacity is of statistical significance ( $P < 0.05$ — $0.01$ ). Comparing with that of the controls, the survival time of Kunming breeding mice and moths of the silkworms is prolonged significantly ( $P < 0.05$ ). Morphology study of medicated 26-month old mice proves that the senility of ovarium, matrix and testis has been retarded; the submicroscopic observation demonstrates that the decoction has protective action on liver cells. It is capable of promoting energy metabolism and synthesis of nucleic acid and protein, improving the survival capacity of lymphocytes in vitro, inhibiting the formation of autogenous rosette, raising lung cAMP content and cAMP/cGMP ratio of the liver and lung, retarding the decrease of bone capacity. As is suggested by clinical and experimental studies the Essence-Restoring Decoction has some effect on retarding aging.

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### A Clinical Study of the Effect of Qing Court Shoutao Pill (清宫寿桃丸) in Slowing Down Aging

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This paper reports the clinical effect of Qing Court Shoutao Pill (QCSP, 清宫寿桃丸 made of eight herbs: Galangal fruit, Rehmannia root, Wolfberry fruit, Walnut, etc.). The dosage administered was 10g twice a day. Vit E therapy (50mg three times a day) was taken as control.

Seventy-three aged patients (over 60) suffering from senile syndrome-complexes were divided randomly into two groups and treated with QCSP (37 cases) and Vit E (36 cases) respectively. After eight weeks of treatment, the score of senile syndrome-complexes (including symptoms of fatigue, intolerance to cold, tinnitus, deficiency of libido, nocturia, etc.) of the two groups decreased  $7.2 \pm 0.62$  ( $M \pm SE$ ) and  $3.5 \pm 0.89$  respectively. It showed that the effect of QCSP was better than that of Vit E ( $P < 0.01$ ). The serum lipidperoxide concentration decreased from  $2.07 \pm 0.54$  nM/ml to  $1.23 \pm 0.33$  nM/ml (10 cases) and from  $2.11 \pm 0.54$  nM/ml to  $1.22 \pm 0.41$  nM/ml (11 cases) respectively (both  $P < 0.001$ ). These results proved that both QCSP and Vit E can regulate the serum lipidperoxide level and have the effect of slowing down aging process.

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### Changes of Level of Peripheral Blood Lymphocyte Acida-Naphthyl Acetate Esterase in Patients with Deficiency Syndromes and Its Clinical Significance

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The paper reports the changes of level of peripheral blood Acida-Naphthyl Acetate Esterase (ANAE) in 71 patients with deficiency syndromes (including cases of posthepatitis with cirrhosis, gastroduodenal ulcer, acute pancreatitis and acute gastroenteritis). The changes of T lymphocyte in patients with deficiency syndromes were studied for the purpose of correlating the deficiency syndromes with cellular immunity. 120 normal controls were studied at the same period. The results of assay showed that in the normal control group ANAE was positive in  $54.32 \pm 6.50\%$ , while in the group of 50 cases with Qi Xu (deficiency of energy)