免疫性血小板减少性紫癜辨证分型与血小板表面相关抗体及T淋巴细胞亚群的关系

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内容提要 为探讨免疫性血小板减少性紫癜(ITP)中医辨证分型与免疫机理的关系，将ITP患者中医辨证分型结合血小板相关抗体(PAIg)及T淋巴细胞亚群进行分析。发现作为本病主要抗体的PAIgG脾肾阴亏型明显高于脾虚失统型（$P<0.01$）；OKT_8^+值亦显著高于脾虚失统型($P<0.05$)，CKT_4^+/OKT_8^+比值则明显低于脾虚失统型（$P<0.05$）。提示脾肾阴亏型的免疫损伤程度较脾虚失统型严重。

关键词 免疫性血小板减少性紫癜 脾肾亏虚证 脾虚失统型 脾肾阴亏型 血小板相关抗体 T淋巴细胞亚群

免疫性血小板减少性紫癜是一种与免疫有关的疾病。目前对本病从体液免疫和细胞免疫方面进行了大量的研究，但探讨中医辨证分型与免疫指标关系的报道甚少。为了进一步研究本病辨证分型与免疫机理的关系，我们对34例ITP脾肾亏虚证患者测定了血小板表面相关抗体(PAIg)及T淋巴细胞亚群，结合辨证分型与这两项指标的关系进行分析。现报告如下。

对象与方法

一、研究对象

健康人对照组为20～30岁的青年学生，共30名，男、女各15名，均为经体检证实无特殊疾病者。ITP患者组：根据首届中华血液学会全国血栓与止血学术会议修订的诊断标准，共收集34例，其中男6例、女28例。分为两型：脾虚失统型13例，年龄12～51岁，男3例，女10例，病程0.5～26年；脾肾阴亏型21例，年龄27～60岁，男3例，女18例，病程2～30年。所有病例均有不同程度的皮肤粘膜出血或月经过多，肝脾淋巴结无肿大，经各种化验检查（如：肝功能、抗核抗体、类风湿因子、狼疮细胞、血沉及抗"O"等）排除了肝病和胶原病等引起的继发性血小板减少性紫癜。

二、检测方法

1. PAIg的测定：参照南通医学院竞争酶联吸附法[1]测定。

2. T淋巴细胞亚群(OKT)测定：采取间接免疫荧光法[2]，以单克隆抗体OKT_3、OKT_4、OKT_8分别测定总T淋巴细胞、辅助性T淋巴细胞和抑制性T淋巴细胞。用Japan Olympus PM-10AD荧光显微镜观测，配套试剂购自北京医科大学。

表1 34例患者辨证分型与PAIg的关系 ($ng/10^7pl$, $\bar{x}\pm S$)

型 别	PAIgG	PAIgA	PAIgM
脾虚失统	57.28±26.26 (13)	18.22±25.84 (11)	7.55±8.75 (13)
脾肾阴亏	112.64±62.12* (21)	18.95±22.74 (17)	8.95±9.45 (21)

注：测定PAIg正常参考值为：PAIgG：0～33ng/10^7pl，PAIgA：0～9.3 ng/10^7pl，PAIgM：0～9.6ng/10^7pl；两型间比较*$P<0.01$；括号内为例数

由表1可见，作为主要抗体的PAIgG值脾肾阴亏型明显高于脾虚失统型（$P<0.01$）。PAIgA、PAIgM两型间无显著性差别。

在34例患者中，我们对25例患者T淋巴细胞亚群进行了测定，结果见表2。

脾虚失统型的OKT_3^+、OKT_4^+ OKT_8^+值

与正常值比较均显著降低（$P<0.05$），OKT_4^+、OKT_8^+值虽有变化，但与正常值比较无显著性差别。脾肾阴亏型的OKT_4^+、OKT_4^+/OKT_8^+值较正常值明显降低（$P<0.001$）、OKT_8^+值较正常值显著升高（$P<0.001$），OKT_3^+值虽也降低，但与正常值比较无显著性差别。脾虚失统型与脾肾阴亏型比较，OKT_8^+值脾肾阴亏型明显高于脾虚失统型（$P<0.05$），OKT_4^+/OKT_8^+值脾肾阴亏型明显低于脾虚失统型（$P<0.05$），OKT_3^+、OKT_4^+值两型间比较无显著性差别。

表2 34例患者辨证分型与T淋巴细胞亚群的关系 （$\bar{x}\pm S$）

分型	OKT_3^+	OKT_4^+	OKT_8^+	OKT_4^+/OKT_8^+
健康人 (30)	68.28 ±5.07	46.18 ±5.99	26.65 ±4.82	1.79 ±0.43
脾虚失统 (10)	62.05 ±11.45△	42.42 ±5.30	29.34 ±2.24	1.46 ±0.23△
脾肾阴亏 (35)	64.33 ±9.14	38.90 ±7.55△△	34.74 ±7.76*△△	1.16 ±0.30*△△

注：与正常值比较△$P<0.05$，△△$P<0.001$；两组间比较 *$P<0.05$

讨　论

体液免疫在ITP的发病机制中起着重要的作用。多数学者认为：它是自身抗血小板抗体致使血小板在网状内皮系统过多破坏所致。从中医学角度认为：本病的主要发病机理是脾肾亏虚为本，火伤血络为标。在观察的34例ITP脾肾亏虚证患者中，PAIg值均有不同程度的增高，而作为主要抗体的PAIgG值脾肾阴亏型明显高于脾虚失统型（$P<0.01$）。临床观察发现，PAIg值越高，出血程度相对越重，脾肾阴亏型的出血程度重于脾虚失统型。由此推测，PAIg可能属于中医理论“血中伏火”的物质基础。它既可灼伤血络，又可耗伤阴血。血小板属阴血成份，致使血小板下降而造成出血。细胞免疫对ITP的发病也起着重要的作用[3]。实验表明，T淋巴细胞不仅能识别抗原，还可起效应细胞作用，可以调节免疫反应的性质和强度。正常机体的Th/Ts比值维持动态平衡，这是决定机体免疫稳定状态的中心环节。一旦Th/Ts比值失衡，即可导致免疫紊乱及一系列病理变化[2]。我们在对25例患者进行T淋巴细胞亚群测定时发现，脾虚失统型和脾肾阴亏型T淋巴细胞亚群均有不同程度变化。前者是以OKT_3^+、OKT_4^+/OKT_8^+降低为主（$P<0.05$）；后者是以OKT_4^+、OKT_4^+/OKT_8^+降低（$P<0.001$）及OKT_8^+升高（$P<0.001$）为主，且较前者OKT_8^+值显著增高（$P<0.05$）、OKT_4^+/OKT_8^+明显降低（$P<0.05$）。说明脾虚时已经影响到T淋巴细胞亚群的总数及比例，有细胞免疫减低的倾向，与文献所述一致[4]，若再加肾阴亏虚，会进一步加重其免疫损伤程度。其细胞免疫特点为抑制性趋势，与文献报道相附[5]。以上结果提示：脾肾阴亏型的免疫损伤程度较脾虚失统型为严重。ITP脾肾亏虚证辨证分型与PAIg及T淋巴细胞亚群之间有较密切的关系。这两项指标的检测可作为本病辨证分型较为客观的指标。

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as a whole, and adjustment effect of human body zinc and copper by TCM treatment. Results showed that the average value of serum zinc of 75 cases of RAU was on lower level within normal range, serum copper was normal, the rate of copper to zinc was higher than normal value. Analysis using the TCM theory showed serum zinc of patients of deficency symptom-complex was lower than excessivess symptom-complex, the rate of copper to zinc of patients of deficency symptom-complex was higher than normal range. The zinc content of serum and the rate of copper to zinc were different in patients of various symptom-complexes of RAU. The zinc and copper contents of serum were adjusted, the rate of copper to zinc was normalized and the immune function of T-cell increased distinctly by TCM treatment according to an overall differentiation of symptoms and signs. Thus the therapeutic effect of TCM was better than zinc preparation.

Key Words recurrent aphthous ulcer, zinc, copper, rate of copper to zinc (Cu/Zn), traditional Chinese medicine treatment according to an overall differentiation of symptoms and signs

(Original article on page 280)

The Research of the Relationship between the Type of Asthenia of both Spleen and Kidney and PAIg and T Lymphocyte Subsets of Idiopathic Thrombocytopenic Purpura

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Idiopathic thrombocytopenic purpura (ITP) is a kind of disease associated with immunity. At present a great quantity of study on ITP has been made on humoral and cellular immunity. But there are few reports about the relationship between the types based on the differential diagnosis of TCM and immune rationale of ITP. In order to deeply explore the relationship between the types based on differential diagnosis of TCM and immune rationale of ITP., the authors measured PAIg and T lymphocyte subsets of 34 ITP patients of asthenia of both Spleen and Kidney. The value of PAIgG increased in both types of Spleen failing to control blood (SFCB) and deficiency of Spleen-yin and Kidney -yin (DSYKY), and the value of PAIgG of the type of DSYKY was significantly higher than that of SFCB ($P<0.01$). OKT_3, OKT_4/OKT_8 of the type of SFCB remarkably decreased ($P<0.05$), OKT_4, OKT_4/OKT_8 of DSYKY also remarkably decreased ($P<0.001$), while OKT_8 significantly increased ($P<0.001$). The above results suggested that the type of DSYKY has more serious immune dysfunction than the type of SFCB,and the types of SFCB and DSYKY has close relationship with PAIg T lymphocyte subsets.

Key Words idiopathic thrombocytopenic purpura, asthenia of both Spleen and Kidney, PAIg, T lymphocyte subsets

(Original article on page 283)

Effect of Total Saponins of Panax Ginseng on Hematopoietic Progenitor Cells in Normal Human and Aplastic Anemia Patients

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Ginseng was said to be benefit for anemia in TCM. Proliferation effects of total saponins of panax ginseng (TSPG) on hematopoietic progenitor cell in normal individuls and 29 patients with aplastic anemia (AA) were observed by bone marrow culture of BFU-E, CFU-E, CFU-GM in vitro compared with methyltestosterone (MT). The results showed that TSPG might prompt proliferation of normal progenitor cells at the concentration of 20 μg/ml. The number of BFU-E, CFU-E and CFU-GM had increased by 37.8±2.9%, 31.4±2.9% and 33.3±4.0% over the controls respectively; furtheremore TSPG was still useful to BFU-E, CFU-E growth without Epo in vitro, although the colony numbers were very lower. Otherwise MT was useless to CFU-GM. 14 of the 29 patients with AA who responded to MT showed sensitivity to TSPG in marrow culture (the rising rate of colony