

# 外伤性视神经萎缩的血液流变学改变

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**内容提要** 本研究通过对外伤性视神经萎缩患者与健康对照的血液流变学比较,发现外伤性视神经萎缩发病除单项红细胞压积无差异外,其余5项指标均呈显著差异( $P < 0.01$ )。同时通过对此类患者的治疗前后血流变学的检查,结果表明中药对外伤性视神经萎缩患者中的红细胞沉降率、纤维蛋白原两项指标改善有意义( $P < 0.01$ )。作者认为出现这一血液流变性的改变是由于外伤后引起微循环障碍,即在微循环血流中,出现血红细胞聚集程度的增加,红细胞内粘度与刚性的升高,而它们所造成的影响均可通过“逆转现象”而被放大对血液流动的阻力,从而使其血流变性引起变化。

**关键词** 外伤性视神经萎缩 血液流变学 逆转现象

由于眼部或颅脑外伤引起视神经挫伤,约3周后出现的下行性视神经萎缩称之为外伤性视神经萎缩。在眼科领域中,有关视网膜中央静脉阻塞(RCVO)与血液流变学关系分析研究报道不少,业已证明RCVO与血液流变学的异常改变有关。笔者经临床对外伤性视神经萎缩的血液流变学的检测研究,发现除红细胞压积单项指标与健康对照组无差异外,其余各项指标均有显著差别。提示外伤性视神经萎缩发病与血液流变学的改变有关。同时通过观察其治疗前后值的比较,发现其中两项指标值改变敏感。现报告如下。

## 资料与方法

**一般资料:** 本组外伤性视神经萎缩病患者共20例,23只眼,男性18例,女性2例;外伤距受检时间最短者25天,最长者6个月,平均2.5个月;年龄20~40岁,平均31岁。外伤致病原因:车祸11例,高处坠落5例,石块击伤2例,铁物打伤2例。就诊时视力黑朦者5只眼,光感~0.09者8只眼,0.1~0.5者6只眼,0.6~0.8者4只眼。其中10例患者经治疗6个月后曾作血液流变学复查。

**诊断标准:** 颅脑或眼部外伤;视力障碍(视力 $< 1.0$ );视野改变;瞳孔直接对光反射迟钝

或消失;视觉诱发电位(VEP)潜时延长或波幅下降。

**治疗方法:** 口服外伤复明汤(经验方)。主要药物有:红花、当归、川芎、丹参、鸡血藤、生黄芪等。日服1剂,水煎2次分服,同时酌情配用丹参片、肌苷口服液、维生素。

**检测指标:** 全血粘度、血浆比粘度、红细胞压积、红细胞沉降率、红细胞聚集指数,纤维蛋白原。

**检查方法:** 早晨空腹抽取静脉血4ml,应用西德HAAK旋转粘度计测定。温度:全血粘度 $37^{\circ}\text{C}$ ,血浆比粘度 $25^{\circ}\text{C}$ ,血浆测定用毛细血管粘度计(管径0.5mm,管长200mm),红细胞压积及血沉用Wintrobe管法。并设立健康成人30例作为对照组。

## 结 果

20例外伤性视神经萎缩的血液流变学指标值与健康对照组比较,见表1、2。

## 讨 论

临床和实验证明,有许多疾病可使血液流变学特性发生变化,而后者又可引起血液循环及微循环障碍、组织灌注不足、缺氧、缺血以及代谢障碍等。人们还发现虽然病变在局部血

表1 两组全血粘度值比较 ( $s^{-1}$ ,  $\bar{x} \pm S$ )

组 别	全 血 粘 度 (mPa, s)					
	9	21	30	45	105	150
健康对照	3.448 $\pm$ 0.566	2.695 $\pm$ 0.412	2.520 $\pm$ 0.413	2.405 $\pm$ 0.394	2.131 $\pm$ 0.349	2.006 $\pm$ 0.329
观察组	4.335 $\pm$ 0.950*	3.297 $\pm$ 0.619*	3.014 $\pm$ 0.515*	2.745 $\pm$ 0.575*	2.352 $\pm$ 0.351*	2.231 $\pm$ 0.306*
疗 前	4.485 $\pm$ 0.893	3.475 $\pm$ 0.583	3.139 $\pm$ 0.496	2.850 $\pm$ 0.600	2.483 $\pm$ 0.355	2.343 $\pm$ 0.311
疗 后	4.650 $\pm$ 1.042	3.514 $\pm$ 0.762	3.095 $\pm$ 0.603	2.940 $\pm$ 0.597	2.471 $\pm$ 0.449	2.380 $\pm$ 0.369

注: 与对照组比较, \* $P < 0.01$ 表2 两组血流变值比较 ( $\bar{x} \pm S$ )

组 别	血浆比粘度	红细胞压积 (%)	红细胞沉降率 (mm/h)	红细胞聚集指数	纤维蛋白原 (mg%)
健康对照	1.700 $\pm$ 0.170	48.500 $\pm$ 2.720	5.680 $\pm$ 6.980	0.731 $\pm$ 0.120	300.0 $\pm$ 100.0
观察组	1.866 $\pm$ 0.116*	49.670 $\pm$ 3.560	10.000 $\pm$ 7.310*	0.649 $\pm$ 0.090*	400.0 $\pm$ 177.8*
疗 前	1.874 $\pm$ 0.153	49.200 $\pm$ 3.458	12.500 $\pm$ 7.764	0.670 $\pm$ 0.077	444.5 $\pm$ 205.5
疗 后	1.834 $\pm$ 0.134	50.300 $\pm$ 4.270	7.400 $\pm$ 5.480*	0.641 $\pm$ 0.050	376.0 $\pm$ 42.2*

注: 与对照组比较, \* $P < 0.01$ 

管但在循环全身的血液亦有明显改变。外伤性视神经萎缩的血液流变学改变, 作者认为是与血液高粘滞综合征有关, 本综合征的关键性表现是外伤后引起微循环障碍, 即在微循环血流中, 出现血细胞聚集程度的增加, 红细胞内粘度与刚性的升高, 而它们所造成的影响均可通过“逆转现象”而被放大对血液流动的阻力, 从而使其血流变性引起变化。

通过20例患者的观察, 发现其血液流变学指标值与健康对照组比较除红细胞压积未见显著差异外 ( $P > 0.05$ ), 其余4项指标值均明显高于正常组 ( $P < 0.01$ ), 从而说明红细胞聚集性的增强, 血粘度的增高是外伤性视神经萎缩发病的重要因素, 而经过治疗后其红细胞沉降率及纤维蛋白原的改善对其临床治疗有一定的意义。

## 大黄外用治疗鼻衄62例

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近3年来, 笔者应用大黄外治鼻衄62例, 效果较为满意。报告如下。

**一般资料** 62例中, 男36例, 女26例。年龄3~10岁29例, 11~20岁18例, 21~40岁11例。出血原因: 鼻中隔糜烂者29例, 鼻腔血管破裂16例, 鼻中隔毛细血管扩张症11例, 高血压致鼻底小动脉血管破裂及不明原因各3例。

**治疗方法** 对急性鼻衄, 量多症急者取大黄粉3~5g, 粘附于油纱布条上, 填塞出血鼻腔; 对慢性鼻衄, 量少症缓者, 取大黄5~10g, 加温开水15~30ml 浸30min去渣, 令患者仰面, 每次滴入出血鼻腔内2~

3滴, 一日3~5次, 血止后续滴3天。填塞法待油纱布条取出后, 可再用本法治疗。

**结 果** 运用填塞法治疗7例, 均为1次止血; 运用滴鼻法治疗55例, 其中一次血止者7例, 1天血止者41例, 2天血止者6例, 3天血止者1例。停用本法10~15天后复见出血者3例(鼻中隔糜烂2例, 鼻中隔毛细血管扩张症1例)。

**体 会** 大黄苦寒, 内服具有泻热毒、破积滞、行瘀血之功。笔者受单味大黄治疗上消化道出血的启示, 以其外用治疗鼻衄, 疗程短, 疗效显著, 简便经济而无副作用。

## Treatment of Secondary Amenorrhea and Oligohypomenorrhea with Combined Traditional Chinese and Western Medicine

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This article reported the treatment of 149 cases (1087 cycles) with secondary amenorrhea and oligohypomenorrhea, including 42 cases who were treated by cycle treatment with traditional Chinese medicine (TCM) and clomiphen in comparison with clomiphen in 67 cases and/or TCM in 40 cases at the same time. The results showed that ovulatory rate of secondary amenorrhea, calculated according to menstrual cycles, was significantly higher in the group of TCM and clomiphen than that of clomiphen or TCM ( $P < 0.01$ ). The efficacy of clomiphen was better than that of TCM ( $P < 0.01$ ). The ovulatory rate of oligohypomenorrhea was significantly increased by using TCM and clomiphen in contrast to only western medicine ( $P < 0.05$ ). The phenomena mentioned above indicate that the TCM-WM treatment has obvious advantages.

**Key Words** secondary amenorrhea, oligohypomenorrhea, treatment of combined traditional Chinese and western medicine, cycle treatment with traditional Chinese medicine

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## Studies on Plasma Cortisol Concentration and Blood Leukocyte Content of Glucocorticoid Receptors in Patients with Deficiency-Cold vs Deficiency-Heat Syndromes

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Plasma cortisol concentration and blood leukocyte content of glucocorticoid receptors (GCR) were assayed in 20 patients with deficiency syndromes, 10 cold in property (deficiency-cold), the other 10 hot in property (deficiency-heat), and also in 10 healthy individuals as normal control for the purpose of investigating the nature of cold and heat syndromes. As a result, the cases of deficiency-cold syndrome (DCS) had a normal concentration of plasma cortisol but a lowered content of GCR in leukocytes when compared with the normal control ( $P < 0.05$ ); the cases of deficiency-heat syndrome (DHS) had a higher concentration of plasma cortisol than the normal control ( $P < 0.05$ ) and a slightly higher content of GCR in leukocytes. It was concluded that the DCS is characterized by diminished biological effects of adrenocortical activity, while the DHS, by augmented biological effects of adrenocortical activity.

**Key Words** deficiency-cold syndrome, deficiency-heat syndrome, cortisol, glucocorticoid receptors

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## Changes in Hemorheology of Traumatic Optic Nerve Atrophy

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Whole blood viscosity (WBV), plasma viscosity (PV), hematocrit, erythrocyte sedimentation rate (ESR) and fibrinogen were assayed in 20 patients with traumatic optic nerve atrophy. The results of each item in the above examinations has been compared with that of the control group. It has been demonstrated that WBV, PV, ESR and fibrinogen in the patient group were significantly higher than that in the control group ( $P < 0.01$ ). But the ESR and fibrinogen of the treatment group were significantly lower than that in the pretreatment group ( $P < 0.01$ ). The authors suggest that the result of changes in hemorheology of traumatic optic nerve atrophy is a kind of reverse phenomenon.

**Key Words** traumatic optic nerve atrophy, hemorheology, reverse phenomenon.

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