

证 的 研 究

肝病血瘀证患者血小板超微结构和功能的研究

张 赤 志* 张 建 军*

摘要 通过对肝病血瘀证患者血小板超微结构和聚集功能研究。结果表明:盘状细胞较少,伪足变形较多,聚集倾向的血小板增多,糖原增多的血小板比例增大,大型血小板比例增多。可见血小板粘附红细胞、白细胞及淋巴细胞现象;血小板内颗粒减少,甚至相互融合,辨认不清;管道系统扩张并增生。易见异常颗粒,大小与 α -颗粒相似,有界膜包绕,内容物为胞浆及代谢产物。其在ADP诱导下,聚集体占70.28%,多数细胞间有桥状联系而模糊不清,甚至细胞间隙消失,细胞膜融。以上变化均较对照组明显。提示血小板超微结构的变化和聚集功能改变,是造成肝病血瘀证的原因之一。

主题词 肝病/病理学 血瘀/病理学 血小板/超微结构

本文对肝病血瘀证患者血小板超微结构和聚集功能进行探讨,阐释其病理状态下的特点,报告如下。

1 资料与方法

1.1 观察对象:选择住院的肝病患者33例。符合肝病血瘀证者21例中,慢性乙型肝炎轻型7例,中、重型12例,活动性肝硬化2例。其中男17例,女4例,年龄28~69岁,平均41.7岁。非血瘀证者12例中,慢性乙型肝炎轻型8例,中型4例。其中男10例,女2例。年龄28~56岁,平均32.8岁。

1.2 诊断标准:慢性乙型肝炎、肝硬化诊断,参照1995年北京会议“病毒性肝炎防治方案”^[1]。肝病血瘀证诊断标准,依据“肝病血瘀证临床病理学特点和肝功能变化”^[2]制定的标准。

1.3 实验方法:观察对象停药各种对血小板有影响的中西药物,并戒烟酒两周以上,取空腹静脉血制成富含血小板血浆(PRP)。

血小板电镜标本制作步骤:按吴锦^[3]方法操作。

血小板超微结构观察方法:(1)血小板一般形态的观察:在电镜下放大4000倍观察血小板一般形态,随

机选择视野拍照两张(共含50个血小板),并计数大型血小板(直径 $>3.5\mu\text{m}$)、盘形血小板及伪足变形血小板所占百分比,同时镜下观察血小板与红细胞及淋巴浆细胞粘附现象。(2)血小板微细结构的观察:每例样本电镜下随机选择一个血小板,放大2~2.5万倍,主要观察其开放管道系统(OCS),致密管道系统(DTS)、糖原颗粒、异常颗粒,并计数其 α -颗粒和致密颗粒。

血小板聚集形态观察方法:在PRP中加入ADP以诱导血小板聚集,取此样本电镜下观察其聚集程度,并分别计数其聚集体之百分比(在50个血小板内)。

2 观察结果

2.1 血小板一般形态的观察:两组患者的血小板形态都有不同程度的变化,尤以血瘀证组变化明显(见表1、表2),主要特点为:(1)盘状细胞较少,伪足变形较多,聚集倾向的血小板增多,糖原增多的血小板比例增大。(2)大型血小板(直径 $>3.5\mu\text{m}$)比例增多。(3)可见血小板粘附红细胞、白细胞及淋巴细胞的现象。(4)血小板内颗粒减少,甚至相互融合,辨认不清。(5)管道系统扩张并增生。(6)易见异常颗粒,大小与 α 颗粒相似,有界膜包绕,内容物为胞浆及代谢产物。

非血瘀证患者血小板以中等大小盘状细胞居多,血小板聚集倾向较少;胞浆中 α 颗粒、致密颗粒及线粒体分布较均匀,开放管道系统(OCS)和致密管道系统(DTS)扩张及增生不多;糖原颗粒呈分散或小簇状态于胞浆中,未见明显增多。仅2~3例非血瘀证患者见伪足及异常血小板增多,聚集倾向明显。

表1 血小板一般形态比较

分组	例数	大型血小板 (%)	盘形血小板 (%)	伪足变形血小板 (%)
血瘀证组	21	12.76 $\pm$ 0.91	24.76 $\pm$ 2.10	62.71 $\pm$ 1.70
非血瘀证组	12	4.75 $\pm$ 0.49*	58.9 $\pm$ 4.35*	38.2 $\pm$ 2.21*

注:表中数据为均值 $\pm$ 标准误,以下表同

* 与血瘀证组比较 $P<0.01$

2.2 血小板聚集形态的观察:通过对两组患者血小板在ADP诱导下聚集状态的电镜观察,发现非血瘀证组聚集体占54.75%,血瘀证组占70.28%,且有少数几

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例呈高度聚集状态。非血瘀证组聚集体中细胞间隙存在,少数间隙中有桥状联系;血瘀证组血小板聚集体较多,多数细胞间有桥状联系而模糊不清,甚至细胞间隙消失,细胞膜融合,细胞伪足增多增长,相互缠绕。

表2 α -颗粒、致密颗粒计数

分组	例数	α -颗粒	致密颗粒
血瘀证组	21	14.33 ± 1.16	0.90 ± 0.18
非血瘀证组	12	$20.0 \pm 0.57^*$	$2.0 \pm 0.12^*$

* 与血瘀证组比较 $P < 0.01$

3 讨论

人体血小板在一般状态下以盘状为主。本研究中所见,血瘀证患者血小板异常形态,大型血小板和伪足变形血小板均较对照组明显增多, α -颗粒和致密颗粒数目较对照组明显减少,而且血瘀证组血小板多粘附红细胞、白细胞和淋巴细胞等。这些形态和结构的异常改变,导致血小板功能的变化,可能是造成血瘀的重要原因之一。

两组患者血小板在ADP诱导下,都可发生不同程度的聚集反应,而以血瘀证较强,这说明血小板易于

激活,使得循环血液中血小板聚集体增多,且由于膜易于融合而为不可逆性之聚集,聚集体粘附血液其他成分,不断增大,附着于血管壁,使管腔逐渐狭窄,血液缓慢瘀滞,造成“血滞不利”的肝内瘀血。另外,血瘀证组的大型血小板较对照组增多明显。现代医学认为大型血小板对ADP或肾上腺素、凝血酶及胶原诱导的血小板聚集较强^[4],血小板形成血栓等,主要是膜粘附于相互的表面或其他成分的表面,并进一步作用的结果^[5],均与本研究结论呈一致性。所以笔者认为,血小板易于激活发生聚集,是“内结为瘀”的形态学基础。

4 参考文献

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右归丸治疗米库利奇氏病1例

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米库利奇氏病,又称唾泪腺肥大或泪腺及唾液腺肥大综合征,为 Mikulicz 氏于 1888 年首先描述,为一种双侧对称性泪腺和腮腺慢性炎症疾患,病因尚不明。本病主要症状为泪腺、腮腺无痛性肿大,发展缓慢,多不伴其他自觉症状。本病目前尚无特效治疗措施。笔者以中医辨证,以补阳填精、温通经络法,用右归饮加味治疗 1 例,取得满意效果,介绍如下。

任某某,男,67岁。于 1991 年 12 月出现左面颊下方红、肿、疼痛、压痛。在我院口腔科治疗,用青霉素、庆大霉素肌注,微波理疗等治疗后发红、疼痛消失,但仍可扪到肿块,自觉左面部跳动,肿胀不适。1992 年 1 月发现在左眼外上方可扪及约蚕豆大小肿块。1992 年 5 月又出现右腮腺肿大伴睾丸肿痛,即到我院住院治疗。经用中西医结合治疗后睾丸肿痛消失,仍存两腮腺肿大,有掣跳、钝木不适感。到某医大口腔医院行双侧腮腺碘油造影拍片提示:(1)符合慢性涎管炎(左侧为甚),(2)多系双腮腺良性肥大伴炎症。CT 检查报告:腮

腺稍大,未见占位。诊断:米库利奇氏病。先后用西药抗生素,中药清热解毒、疏风、活血化痰等法治疗,病情未见减轻。1995 年 11 月来我院就诊。症见两腮部肿胀,钝木不适,可扪及包块、质较软。畏寒,尤以双下肢冷更甚,夜间需热水袋暖脚,腰酸膝软,舌淡红、苔薄白,脉细尺弱。中医辨证为肾阳虚损,少阳经脉凝滞。用右归丸加味。处方:鹿角胶 20g,当归 20g,熟地 20g,山药 20g,山萸肉 20g,枸杞 15g,肉桂 15g,附片 15g,菟丝子 15g,洋参 15g,柴胡 15g,橘络 15g,桂枝 15g。

连服 8 剂后,两腮部掣跳、胀、钝木不适感消失,畏寒、下肢冷已缓,腮部肿块及左眼外上方肿块基本消失。随访半年,未见复发。

按:据患者临床表现,辨证为肾阳虚损,少阳经脉凝滞。肾阳虚不能温煦,故见畏寒、下肢冷。腮腺和泪腺均是少阳胆经循行之处,命门火衰,经脉失于温煦,气血凝滞,少阳胆经气血运行不畅,故见腮腺、泪腺肿块,腮部不适等症。治疗当补阳填精,温通经络。方以右归丸补阳填精,方中附片、当归能温经活血;加桂枝、柴胡、橘核、橘络走少阳通络散结,洋参能振奋元气且能补阴。方证相符,故奏良效。

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ABSTRACTS OF ORIGINAL ARTICLES

Observation on Effect of Chronic Bronchitis and Asthma Treated by Principle of " Winter Diseases Treated in Summer": Report of 600 Cases.

Zhang Xuefeng

600 cases of chronic bronchitis and asthma were treated during the period of 3—fu (dog—days) period by acupuncture back acupoints or applying paste of white mustard seed to the points. The results were: 43 cases cured, 264 cases ameliorated, 93 ineffective, the total effective rate being 80.5%. Best results were seen in asthma of the type of lung bound by wind and cold, its effective rate being 90%; effect for the same type in chronic bronchitis and damp—phlegm type was the next, with a total effective rates of 85.71% and 88.19% respectively.

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Key Words: Bronchitis/TCM therapy asthma/TCM therapy @ winter diseases treated in summer

(Original article on page 730)

Clinical and Experimental Studies on Chronic Renal Insufficiency Treated by Method of Removing Dampness and Expelling Phlegm.

Wang Hongzhong, Zhang Jinjun, Chen Zhigang, Li Huilan

Seventy—four cases were treated with Shenshuai (Renal insufficiency) capsule. Short—term results showed that it increased the level of SOD, the difference being significant when compared with that in the control group of 34 cases; whereas there was no difference between the 2 groups in terms of lowering of urea nitrogen, creatinine and MDA and of increase of blood hemoglobin. For long—term result, the difference was very significant. The living quality of the treatment group was obviously superior to the control group. Experiments also showed that the capsule, as compared with the control group, markedly lowered the creatinine and urea nitrogen and increased SOD in rats.

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Key Words: Renal insufficiency, chronic/TCM therapy removing dampness—expelling phlegm

(Original article on page 732)

Study on Thrombocytic Ultrastructure and Functions

of Blood Stasis Syndrome in Liver Disorders.

Zhang Chizhi, Zhang Jianjun

The results of this study revealed that there was less discoid cell and more pseudopodium, more thrombocytes tended to agglutinate with increased proportion of hyper—glycogenic platelets. There were also platelets sticking to RBC, WBC and lymphocytes. The granules within the platelets were decreased or even fused together, unable to differentiate them. The vascular system were dilated and proliferated. Abnormal granules were seen with its size similar to a—granules, covered with membrane, with cytoplasm and metabolites inside. Under the revulsion of ADP, there was 70.28% agglutinating body. Most intercellular spaces revealed unclear bridge—form connection or even disappeared with fusion of cellular membrane. All these changes were more distinctive than that in the control group, demonstrating the changes in ultrastructure and agglutination function might be one of the causes of blood stasis in hepatopathy.

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Key Words: Hepatic disorders/pathology blood stasis/pathology platelet/ultrastructure

(Original article on page 740)

Observation on Action of Zheng Xuan Yin on Improvement of Blood Circulation of Cerebral Ischemia in Rats with ¹²³I—IMP Tracer.

Wang Jingyi, Maata Yasihiluo, Hatuoi Nauoya, Cui Xili, et al

4VO rat models were used. The remedy Zhenxuan Yin, composed of Rhizoma Gastrodia, Poria, Radix Lugustici Chuanxiong, divided into 3 dosages, were infused 30 minutes after total cerebral infarction. The cerebral blood flow was marked with ¹²³I—IMP 24 hours later. Results showed Zhenxuan Yin in dosages of 0.03g/kg, 0.3g/kg, 1g/kg, 3g/kg all markedly increased cerebral blood flow in which the dose 0.3g/kg can restore the blood flow to a normal level.

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Key Words: cerebral ischemia/TCM therapy @ zhenxuan Yin @ ¹²³I—IMP

(Original article on page 742)