DOI: 10.16016/j.1000-5404.1999.09.009

served. **Results:** The bactericidal activity was the strongest when BPI fragment was cultured with the bacteria for 0.5 to 2 h and it increased with acidity and decreased with alkalinity. The bactericidal activity increased considerably along with the increase of bacterial number and serum concentration. When BPI fragment was cultured with the bacteria for 5 min, their outer membrane became fuzzy and cracked cells were found under electron microscopy after 30 min of culture. **Conclusion:** The bactericidal capability of BPI functional fragment is quite similar to that of BPI and it is possible that BPI fragment exercises its killing effect on bacteria through its contact with the bacterial outer membrane.

Key words BPI; bacterium

ITP患者血小板四项参数的变化

The changes of four platelet parameters in patients with idiopathic thrombocytopenic purpura

宫立众* 孙士红** 张茂宏*** 徐从高*** (第三军医大学附属西南医院血液内科) 重庆, 400038

血液自动分析仪除了为临床提供常规参数外,还为临床提供了许多有价值的参数。对于血小板的检查,除了提供血小板计数(PLT)外,还可以测试血小板压积(PCT)、平均血小板体积(MPV)及血小板分布宽度(PDW)。我们利用 MEDONIC CA 610血细胞自动分析仪检测了 32例特发性血小板减少性紫癜(ITP)患者血小板四项参数,分析了各参数之间的相关性,现报告结果如下。

1 对象及方法

1.1 对象

32例患者,男 7例,女 25例,平均年龄 29.7岁(17~71岁),均为山东医科大学附属医院血液内科 1996~1997年初诊住院治疗的 ITP患者,均符合诊断标准[1]。正常对照 32例,为年龄相当、无家庭及血液系统疾病史,体检正常,一个月内未服用药物的"正常"人。

1.2 操作方法

手指外周血 20μl,立即吹入 10 ml稀释液内,稀释混匀,2 h内上机测试 PLT、MPV、PDW, PCT为 PLT与 MPV的乘积。仪器为瑞典产 MEDONIC CA610血细胞自动分析仪,全套试剂由原公司提供。

1.3 数据处理

利用 SAS软件进行 t检验和相关分析。

2 结果

2.1 ITP患者血小板四项参数的变化见表 1

表 1 ITP患者血小板四项参数检测结果 ($\bar{x} \pm s$, $n = 32$)

	PLT(×10^9/L)	MPV(fl)	PCT(‰)	PDW(%)
正常组	181.1± 10.77	8.55± 1.43	1.54± 0.40	17.9± 2.03
ITP组	27.16± 12.54**	12.53± 1.46**	0.34± 0.20**	13.07± 3.24**

*: $P < 0.05$, **: $P < 0.01$ 与正常组比较

2.2 ITP患者 PLT、MPV、PDW之间相关性分析

PLT与 MPV、PLT与 PDW之间无相关性, $P > 0.05$。MPV与 PDW呈非线性负相关, $r = -0.83$, $P < 0.001$。

3 讨论

ITP是临床上常见的一种血小板减少性出血性疾病,因自身免疫而造成血小板破坏增多,寿命缩短,更新加快。ITP患者 PLT、PCT、PDW减少,而 MPV增大。MPV增大,表示循环中血小板年龄年轻,从骨髓中释放不久。PDW缩小,提示血小板体积变异系数小。MPV增大, PLT、PDW减少,三者结合起来考虑,支持 ITP患者循环中血小板以大体积、年龄年轻的为主;血小板减少是由于血小板破坏增加所致。本组病人中 MPV≥10 fl的占 96.9%(31/32),其它疾病亦可出现 MPV增大[2,3],因此, MPV作为诊断 ITP的指标,灵敏度高,但特异性差。PDW在正常人与 ITP患者有交叉,诊断价值不如 MPV。

* 宫立众,男,32岁,主治医师,讲师
** 附属新桥医院肝胆外科 重庆, 400037
*** 山东医科大学附属医院血液病研究室 济南, 250012

(下转 644页)

?1994-2016 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net

胆管癌细胞浸润能力的影响.中华医学杂志, 1995, 75(11): 660

3 Iwamoto Y, Robey F A, Graf J, *et al*. YIGSR, a synthetic laminin pentapeptide, inhibits experimental metastasis formation. Science, 1987, 238(20): 1132

4 王曙光,韩本立,陈意生,等.胆管癌浸润、转移及抗浸润的实验研究.第三军医大学学报, 1994, 16(4): 307

5 WaCher M P, Krutzsch H C, Liotta L A, *et al*. Development of a novel substrate capture immunoassay for the detection of a neutral metalloproteinase capable of degrading basement membrane (Type Ⅳ) collagen. J Immunol Methods, 1990, 126(2): 239

6 Yu H, Schultz R M. Relationship between secreted urokinase plasminogen activator activity and metastatic potential in murine B16 cells transfected with human urokinase sense and antisense genes. Cancer Res, 1990, 50(23): 7623

7 Persky B, Ostrowski L E, Pagast P, *et al*. Inhibition of proteolytic enzymes in the in vitro amnion model for basement membrane invason. Cancr Res, 1986, 46(8): 4129

8 Mecham R P, Hinek A, Griffin G L, *et al*. The elastin receptor shows structural and functional similarities to the 67-kDa tumor cell laminin receptor. J Biol Chem, 1989, 264(28): 16652

9 王曙光,韩本立,段恒春,等.层激酶型纤维蛋白溶酶原激活物在胆管癌浸润过程中的作用.中华医学杂志, 1996, 76(8): 594

(收稿: 1998-02-27;修回: 1999-04-29)
(编辑 王 红)

Effects of external laminin segment, P11, on the invasive potential of malignant biliary cells*

Wang Shuguang, Han Benli, Duan Hengchun (Center of Hepatobiliary Surgery, Southwest Hospital, Third Military Medical University, Chongqing, 400038)

Abstract **Objective**: To study the effects of laminin segment, P11 amide, on the invasive potential of malignant biliary cells and look for a possible anti-invasive agent. **Methods**: After QBC_{939} cells of biliary malignancy were cultured with P11 amide, the changes of the secretion of typeⅣ collagenase and urokinase type plasminogen activator were determined. In a human amnion infiltration culture system, the invasive potential of QBC_{939} cells before and after the treatment of P11 amide were observed. **Results**: Laminin segment or P11 amide, contrary to laminin, inhibited significantly the secretion of typeⅣ collagenase, showed no effect on the secretion of urokinase type plasminogen activator and suppressed the invasive potential of the treated QBC_{939} cells. **Conclusion**: Laminin induces the secretion of typeⅣ collagenase in malignant biliary cells and mediates their malignant invasion through its combination with its receptors on the surface of malignant biliary cells. The employment of P11 amide blocks the combination between laminin and its receptors which might serve as an anti-invasive agent for biliary cancer.

Key words laminin; neoplastic invasion; biliary neoplasm

* This project was supported by the "Eight five" obligatory budget of PLA

(上接 641页)

血小板破坏过多而引起的血小板减少,亦可见于消耗性血小板减少症,如血管内溶血、血栓性血小板减少性紫癜、溶血-尿毒症综合征等,由于其机理主要为血小板破坏增多,更新加速,血小板四项参数变化与 ITP相同。因此,仅用血小板四项参数的变化,不能作出血小板减少症的病因诊断,尚需结合其他临床资料,但可以提示血小板减少的机理。

正常人 PLT与 MPV、PLT与 PDW、MPV与 PDW成非线性负相关[4],但在 ITP患者 PLT与 MPV、PLT与 PDW的反比关系消失。MPV与 PDW仍呈非线性反比关系。PLT与 MPV、PLT与 PDW反比关系消失,可能是由于大 MPV群体血小板为主所致。

关键词 特发性血小板减少性紫癜;平均血小板体积;血小板压积;血小板分布宽度

中图法分类号 R331.143; R554.6

参考文献

1 张之南 主编.血液病诊断与疗效标准.天津:天津科学技术出版社, 1991.245~247

2 孙朝晖,朱爱辛,刘海英,等.老年急性感染性疾病血小板四项参数检测的临床意义.实用老年医学杂志, 1997, 11(4): 162

3 丁 丽,强蕴蕴,郭清芳,等.乙型肝炎患者血小板计数及平均血小板体积的检测.西安医科大学学报, 1995, 16(4): 431

4 孙 苇,赵素荣,鲍震霄,等.血小板四项参数的正常参考范围.中华医学检验杂志, 1993, 16(2): 107

(收稿: 1998-05-28;修回: 1999-03-19)
(编辑 汪勤俭)

?1994-2016 China Academic Journal Electronic Publishing House. All rights reserved. http://www.cnki.net