

本期目录 | 下期目录 | 过刊浏览 | 高级检索

[打印本页] [关闭]

论著

## Survivin在类风湿关节炎中的表达及意义

陈进伟, 刘明, 毛妮, 曾艳

中南大学湘雅二医院风湿免疫科,长沙 410011

**摘要:** 目的:探讨存活素(survivin)与类风湿关节炎(RA)发生发展的关系,以及与难治性类风湿关节炎(RRA)多药耐药的相关性。方法:按照入组标准收集正常人15例、RA初诊未治组35例,治疗有效组20及难治组25例。采用免疫细胞化学法检测外周血淋巴细胞上survivin的表达。结果:外周血淋巴细胞中survivin阳性表达率RA初诊未治组明显升高,与正常对照组相比差异有统计学意义

( $\chi^2=29.59, P<0.01$ ); RA治疗有效组稍有升高,与正常对照组相比差异无统计学意义

( $\chi^2=1.591, P>0.05$ ); RA难治组明显升高,与正常对照组( $\chi^2=26.53, P<0.01$ )和RA治疗有效组

( $\chi^2=24.35, P<0.01$ )相比差异均有统计学意义,与初诊未治组比差异无统计学意义

( $\chi^2=0.014, P>0.05$ )。结论:Survivin 可能参与了类风湿关节炎的发病过程,可能参与难治性RA多药耐药,是难治性RA多药耐药形成机制之一。

**关键词:** 类风湿关节炎 多药耐药 存活素

## Expression of survivin in rheumatoid arthritis

CHEN Jinwei, LIU Ming, MAO Ni, ZENG Yan

Department of Rheumatology, Second Xiangya Hospital, Central South University, Changsha 410011, China

**Abstract:** Objective: To detect the correlation between survivin and rheumatoid arthritis (RA) to determine the possible mechanism of RA and multidrug resistance in refractory rheumatoid arthritis (RRA).

Methods: We collected 15 normal controls, 35 early untreated RA patients, 20 effectively treated RA patients and 25 RRA patients according to selection standard. The expression of survivin in the peripheral blood lymphocytes was detected by immunocytochemical method. Results: There was significant difference in the survivin expression in the peripheral blood lymphocytes between the early untreated and normal control group ( $\chi^2=29.59, P<0.01$ ). The survivin expression in the peripheral blood lymphocytes of effectively treated RA group slightly elevated, but had no significant difference with the normal control group ( $\chi^2=1.591, P>0.05$ ). The survivin expression in the peripheral blood lymphocytes of the RRA group was significantly stronger than in the effectively treated RA group ( $\chi^2=24.35, P<0.01$ ), and normal control group ( $\chi^2=26.53, P<0.01$ ), with no significant difference compared with early untreated group ( $\chi^2=0.014, P>0.05$ ).

Conclusion: Survivin has an influential role in the occurrence and development of rheumatism arthritis. Survivin might be involved in refractory multidrug resistance of RA and be one of the multidrug resistance mechanism of RRA.

**Keywords:** rheumatoid arthritis (RA) multidrug resistance (MDR) survivin

收稿日期 2012-02-10 修回日期 网络版发布日期

DOI: 10.3969/j.issn.1672-7347.2013.02.013

基金项目:

国家自然科学基金(81172850)。

通讯作者: 陈进伟,Email:jinwei73104@yahoo.com.cn

作者简介: 陈进伟,教授,主任医师,主要从事难治性风湿性疾病多药耐药的研究。

作者Email: jinwei73104@yahoo.com.cn

[打印本页]

扩展功能

本文信息

► Supporting info

► PDF(909KB)

► [HTML全文]

► 参考文献[PDF]

► 参考文献

服务与反馈

► 把本文推荐给朋友

► 加入我的书架

► 加入引用管理器

► 引用本文

► Email Alert

► 文章反馈

► 浏览反馈信息

本文关键词相关文章

► 类风湿关节炎

► 多药耐药

► 存活素

本文作者相关文章

► 陈进伟

► 刘明

► 毛妮

► 曾艳

PubMed

► Article by CHEN Jinwei

► Article by LIU Ming

► Article by MAO Ni

► Article by ZENG Yan

## 参考文献：

1. Ambrosini G, Adida C, Altieri DC. A novel anti-apoptosis gene Survivin expressed in cancer and lymphoma [J]. Nat Med, 1997, 3(8):917-921.
2. Altieri DC. Survivin, cancer networks and pathway-directed drug discovery [J]. Nat Rev Cancer, 2008, 8(1): 61-70.
3. Frank A, Sibylla M, Shida Y, et al. Inflammation-associated cell cycle independent block of apoptosis by survivin intermediately differentiated neutrophils [J]. Exp Med, 2004, 199(10): 1343-1354.
4. Cheung CH, Chen HH, Kuo CC, et al. Survivin counteracts the therapeutic effect of microtubule de-stabilizers by stabilizing tubulin polymers [J]. Mol Cancer, 2009, 8(1): 43.
5. 任彬, 杨敏. 云克治疗难治性类风湿性关节炎32例临床观察 [J]. 黑龙江医学, 2008, 12(35): 928-929. REN Bin, YANG Min. Clinical observation on refractory rheumatic arthritis treated with Yunke [J]. Heilongjiang Medical Journal, 2008, 12(35): 928-929.
6. Kurosaka D, Hirai K, Nishioka M, et al. Correlation between synovial blood flow signals and serum vascular endothelial growth factor levels in patients with refractory rheumatoid arthritis [J]. Mod Rheumatol, 2009, 19(2): 187-191.
7. Starovskaya AA. Cellular mechanisms of multidrug resistance of tumor cells [J]. Biochemistry (Mosc), 2000, 65(1): 95-106.
8. 刘继红, 李卫东, 林志彬. 类风湿关节炎细胞凋亡的研究现状 [J]. 中国临床药理学与治疗学, 2003, 8(2): 232-236. LIU Jinhong, LI Weidong, LIN Zhibin. Advances in study of fibroblast apoptosis in rheumatoid arthritis [J]. Chinese Journal of Clinical Pharmacology and Therapeutics, 2003, 8(2): 232-236.
9. Isgren A, Forslind K, Erlandsson M, et al. High survivin levels predict poor clinical response to infliximab in patients with rheumatoid arthritis [J]. Semin Arthritis Rheum, 2012, 41(5): 652-657.
10. Yin Q, Shen J, Chen L, et al. Overcoming multidrug resistance by delivery of Mdr-1 and survivin-targeting RNA with reductionresponsible cationic poly ( $\beta$ -amino esters) [J]. Biomaterials, 2012, 33(27): 6495-6506.
11. Svensson B, Hafstrom L, Forslind K, et al. Increased expression of proto-oncogene survivin predicts joint destruction and persistent disease activity in early rheumatoid arthritis [J]. Ann Med, 2010, 42 (1):45-54.
12. Ahn JK, Oh JM, Lee J, et al. Increased extracellular survivin in the synovial fluid of rheumatoid arthritis patients: fibroblast-like synoviocytes as a potential source of extracellular survivin [J]. Inflammation, 2010, 33(6): 381-388.
13. Bokarewa M, Lindblad S, Bokarew D, et al. Balance between survivin, a key member of the apoptosis inhibitor family and its specific antibodies determines erosivity in rheumatoid arthritis [J]. Arthritis Res Ther, 2005, 7(2): R3492-3581.
14. Che XF, Zheng CL, Owatari S, et al. Overexpression of survivin in primary ATL cells and sodium arsenite induces apoptosis by downregulating survivin expression in ATL cell lines [J]. Blood, 2006, 107(12): 4880-4887
15. 陈进伟, 骆容, 张广森, 等. K562/AO2 耐药细胞NF- $\kappa$ B活性测定 及葛根素部分逆转耐药效应的初步研究 [J], 中华血液学杂志, 2006, 27(7): 482-484. CHEN Jinwei, LUO Rong, ZHANG Guangsen, et al. Detection of NF- $\kappa$ B activity on K562/AO2 cells and effect of puerarin in reversing the multidrug resistance of K562/AO2 cell [J]. Chinese Journal of Hematology, 2006, 27(7): 482-484.
16. 陈进伟, 陶师, 骆容. Puerarin逆转K562/AO2耐药的分子机制 [J]. 中南大学学报: 医学版, 2008, 3(33): 216-221. CHEN Jinwei, TAO Shi, LUO Rong, et al. The Puerarin suppresses K562 and K562/AO2 cells growth and reverse the multidrug resistance of K562/AO2 [J]. Journal of Central South University. Medical Science, 2008, 3(33): 216-221.

## 本刊中的类似文章

1. 张海霞, 王连生. 多态变异对药物转运体活性影响及其临床意义[J]. 中南大学学报(医学版), 2008, 33(08): 765-769
2. 陈进伟, 陶师, 骆容, 张广森, 徐运孝. Puerarin逆转K562/AO2耐药的分子机制 [J]. 中南大学学报(医学版), 2008, 33(03): 216-221
3. 林秀梅; 谢兆霞; 祝焱; 祝平安; 李薇;. 急性白血病多药耐药相关蛋白及P糖蛋白表达与临床耐药的关系[J]. 中南大学学报(医学版), 2002, 27(6): 522-
4. 易红 杨轶轩 汤参娥 陈主初 张桂英 肖志强.

# Sorc1n蛋白高表达与胃癌细胞多药耐药的关系

[J]. 中南大学学报(医学版), 2006, 31(03): 340-

344

5. 张梅春 胡成平 陈琼 夏莹.

Survivin反义寡核苷酸治疗耐顺铂人肺腺癌细胞  
裸鼠移植瘤的实验研究

[J]. 中南大学学报(医学版), 2006, 31(05): 717-

722