[1]刘茜,姚伟,甘丹,等.老年下呼吸道细菌性感染患者血清降钙素原水平及其临床意义[J].第三军医大学学报,2013,35(14):1524-1527.



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老年下呼吸道细菌性感染患者血清降钙素原水平及其临床音义而分

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Title: Serum procalcitonin and its significance in senior patients with

bacterial infection in lower respiratory tract

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关键词: 降钙素原; TNF-α; IL-8; 内毒素

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摘要:

目的 检测老年下呼吸道细菌性感染患者血清降钙素原 (procalcitonin, PCT)水平的变化,探讨其与炎症程度、内毒素水平的相关性及其临床意义。 方法 选取

2009年1月至2013年1月收治的老年下呼吸道细菌性感染患者72例,年龄 (83.4±7.8)

岁,其中G 菌肺炎45例(包括重症13例和非重症32例),G 菌肺炎27例(包括重症16例和非重症11例)。另选取45例同期非特异性肺炎(非典型病原体或病毒感染)老年患者作为对照组。分别检测患者未经抗菌药物治疗前血清PCT、TNF- $\alpha$ 、IL-8、内毒素水

平,统计分析PCT水平与炎症程度、各炎性因子、内毒素相关性。 结果 ①老年 G 菌肺炎患者血清PCT水平均明显高于非特异性肺炎组(P<0.01)。重症G 菌肺炎组患者

PCT水平与TNF-α、IL-8水平正呈相关(r=0.863,P<0.01;r=0.877,P<0.01),与血清内毒素水平无相关性(r=0.391,P>0.05)。非重症G 菌肺炎组患者PCT水平与内毒素水

平正相关(r=0.898,P<0.01)。②与非特异性肺炎老年患者相比,在老年G<sup>†</sup>菌肺炎患者中,非重症组患者血清PCT无明显升高(P>0.05);重症组血清PCT明显升高

(P<0.01), PCT变化与TNF-α、IL-8水平正相关 (*r*=0.865, P<0.01, *r*=0.745,

P<0.01)。 结论 老年下呼吸道细菌性感染患者血清PCT变化与感染细菌类型、炎症程度有关。血清PCT对非重症G菌、G<sup>†</sup>菌下呼吸道感染鉴别诊断、病情评估具有一

定的参考价值。

Abstract: Objective To investigate the serum levels of procalcitonin (PCT) and its

correlation with cytokines and endotoxin in senior patients with bacterial infection in lower respiratory tract. Methods Seventy-two hospitalized

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pneumonia patients with a mean age of 83.4 $\pm$ 7.8, including 45 cases with G bacteria pneumonia and 27 cases with G<sup>+</sup> bacteria pneumonia, in our department from January 2009 to January 2013 were subjected in this study, and were divided into severe (n=13 for  $G^-$  bacteria and n=16 for  $G^+$  bacteria) and nonsevere subgroups (n=32 for  $G^-$  bacteria and n=11 for  $G^+$  bacteria). Another 45 agematched pneumonia patients with no typical pathogen during the same period served as control. Serum levels of the PCT, TNF-a, IL-8, and endotoxin before and after anti-bacterial therapy were detected. The correlations of PCT level with inflammatory severity, serum levels of inflammatory cytokines, and endotoxin were analyzed. Results In senior patients with G bacteria pneumonia. serum PCT level was significantly higher than the control (P<0.01). In severe subgroup of G bacteria pneumonia, the serum level of PCT was positively correlated with those of TNF- $\alpha$  and IL-8 (r=0.863, P<0.01; r=0.877, P<0.01) , but not with that of endotoxin (r=0.391, P>0.05). In non-severe subgroup, the level of PCT had positive correlation with that of with endotoxin (r=0.898, P<0.01). There was no significant difference in the serum PCT level between in the nonsevere patients with G<sup>+</sup> bacteria pneumonia and the control (P>0.05), but its was significantly higher in the severe patients with  $G^{\dagger}$  bacteria pneumonia (P<0.01). Its change was positively correlated with serum levels of TNF- $\alpha$  and IL-8 (r=0.865, *P*<0.01; *r*=0.745, *P*<0.01) . Conclusion Serum PCT level in senior patients with bacteria pneumonia is correlated with the bacterial types and the inflammatory severity. Serum PCT is an important indicator for the diagnosis and assessment of bacteria pneumonia in senior patients.

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