

POSTER PRESENTATION

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Evaluation of early immune response in multitrauma patients admitted in ICU: the effect of age

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Introduction

It is known the negative effect of urgent clinical incidents on the immunological status of patients. Several clinical and demographic data, including age are related to it.

Objectives

The aim of the study is the evaluation of early immune response in multitrauma patients on admission in ICU according to patient's age.

Methods

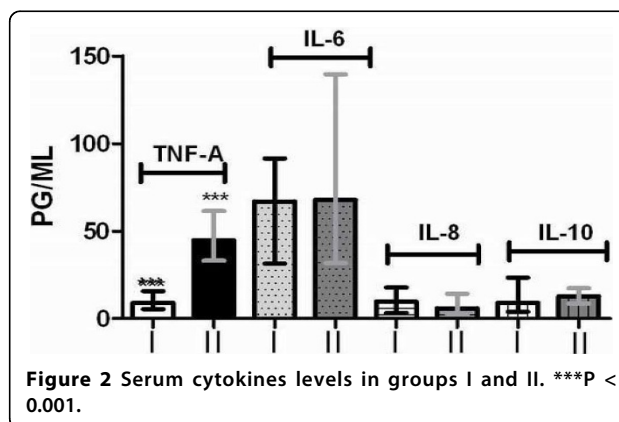
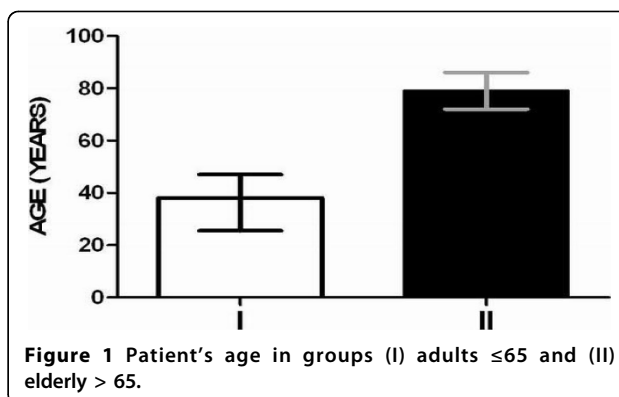
Thirty two multitrauma patients issued in ICU included in the study classified into two groups according to their age, (I) adults ≤ 65 (N = 14) and (II) elderly > 65 (N = 18) years old. Ten milliliters of peripheral blood collected from each patient on admission, divided into two tubes with/without anticoagulant. Whole blood samples diluted 1:10 with RPMI 1X, incubated with /without 500pg/ml LPS at 37°C for 4H. Serum and cell culture supernatants (CCSPs) isolated by centrifugation and stored at -70°C. Tumour necrosis factor alpha (TNF-a) and interleukins 6, 8, 10 (IL-6, IL-8, IL-10) measured in serum and CCSPs with ELISA. Statistical analysis was performed with Graphpad 5.0. Data are presented as Median +/- IQRs; a P value < 0.05 accepted as significant.

Results

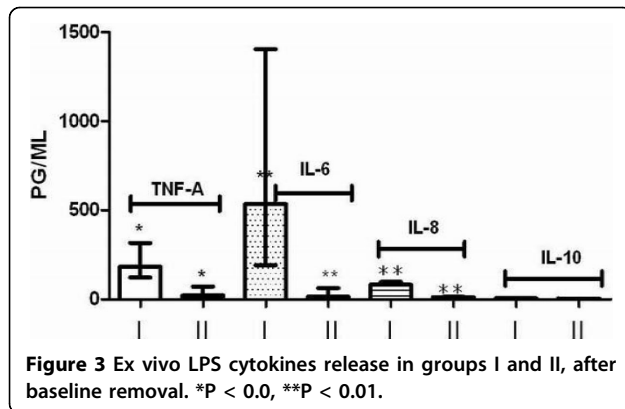
Serum TNF-a was significantly higher in elderly (P < 0.01), while IL-6, IL-8 and IL-10 had no significant differences between groups. Opposite, ex vivo cytokines release was significantly lower in elderly (I) compare to adults (II), TNF-a (P < 0.05), IL-6 (P < 0.01) and IL-8 (P < 0.01) but not IL-10 (P > 0.05).

Conclusions

The effect of age seems to be critical on the immune response of severe trauma patients at the early state of the incident.



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References

1. Filippou L, Venetsanou K, Voulalas G, Markopoulou D, Chroni D, Maltezos C, Alamanos I: **Study of the ex vivo immune response of polytrauma older patients in the ICU on admission: preliminary results.** *Critical Care* 2014, **18**(Suppl 1):P236.
2. Bruunsgaard H, Pedersen AN, Scholl M, Kinholz P, Pedersen BK: **Impaired production of proinflammatory cytokines in response to lipopolysaccharide (LPS) stimulation in elderly humans.** *Clin Exp Immunol* 1999, **118**:235-241.

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