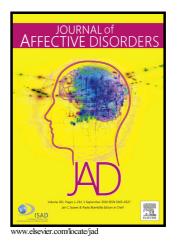
Author's Accepted Manuscript

Difference in proinflammatory cytokines produced by monocytes between patients with major depressive disorder and healthy controls

Hong-Xia Zhang, Ye-Qing Xu, Yuan-Yuan Li, Ming-Fang Lu, Shen-Xun Shi, Jian-Lin Ji, Li-Wei Wang



 PII:
 S0165-0327(17)31327-7

 DOI:
 https://doi.org/10.1016/j.jad.2017.12.099

 Reference:
 JAD9507

To appear in: Journal of Affective Disorders

Received date: 29 June 2017 Revised date: 29 November 2017 Accepted date: 31 December 2017

Cite this article as: Hong-Xia Zhang, Ye-Qing Xu, Yuan-Yuan Li, Ming-Fang Lu, Shen-Xun Shi, Jian-Lin Ji and Li-Wei Wang, Difference in proinflammatory cytokines produced by monocytes between patients with major depressive disorder and healthy controls, *Journal of Affective Disorders*, https://doi.org/10.1016/j.jad.2017.12.099

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Difference in proinflammatory cytokines produced by monocytes between patients with major depressive disorder and healthy controls

Hong-Xia Zhang ^a, Ye-Qing Xu ^b, Yuan-Yuan Li ^c, Ming-Fang Lu ^d, Shen-Xun Shi ^a, Jian-Lin Ji ^c, *, Li-Wei Wang^a,*

^aDepartment of Psychiatry, Huashan Hospital, Fudan University, Shanghai, China

^bShanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, Shanghai, China

^cDepartment of Psychological Medicine, Zhongshan Hospital, Fudan University, Shanghai, China ^dDepartment of Immunology, Shanghai Medical School, Fudan University, Shanghai, China

Abbreviations: MDD, major depressive disorder; LPS, lipopolysaccharide; TNF-α, tumor necrosis factor-alpha; IL-6, interleukin 6; IL-1β, interleukin 1 beta; PHA, phytohemagglutinin; ACTH, adrenocorticotropic hormone; M.I.N.I., Mini International Neuropsychiatric Interview; HAMD17, 17-item Hamilton Depression Scale; LES, Life Events Scale; EDTA, ethylenediaminetetraacetic acid; PBMC, Peripheral blood mononuclear cells;

* Corresponding authors.

E-mail address: lwwang163@163.com (L.W. Wang); jianlinji@aliyun.com (J.L. Ji)

Prof. L.W. Wang, Department of Psychiatry, Huashan Hospital, Fudan University, 12 Middle Urumqi Road, Jing'an District, Shanghai 200040, China, lwwang163@163.com, Tel: +86-21-52889999

Prof. J.L. Ji, Department of Psychological Medicine, Zhongshan Hospital, Fudan University, 180 Fenglin Road, Xuhui District, Shanghai 200032, China, jianlinji@aliyun.com, Tel: +86-21-64041990-2662

Abstract

Background: Immune activation and suppression in patients with major depressive disorders (MDD) have been both reported in different studies. We assume that these findings may indicate innate immunological tolerance in MDD, with subclinical elevated level of proinflammatory cytokines and the decrease in innate immune response while encountering pathogens.

Methods: Peripheral monocytes of 50 untreated patients with MDD and 40 healthy controls were isolated and cultured, with or without 10 ng/ml lipopolysacchride (LPS) for 6 hours (6 h, LPS+/-), and with LPS for 18 hours (18, LPS+). The cell culture supernatants were collected to measure concentrations of tumor necrosis factor-alpha (TNF- α), interleukin 6 (IL-6), and interleukin 1 beta (IL-1 β).

Results: The baseline concentrations of IL-6 and IL-1 β (6 h, LPS-) were significantly higher in the MDD group than those in the control group. There was no significant difference of TNF- α between the two groups. The fold changes of LPS-induced secretion of IL-6 and IL-1 β from monocytes cultured for 6 and 18 hours were all lower in the patient groups, and that was true for IL-1 β as monocytes cultured for 18 hours.

Download English Version:

https://daneshyari.com/en/article/8815581

Download Persian Version:

https://daneshyari.com/article/8815581

Daneshyari.com