



MEETING ABSTRACT

Open Access

PW03-004 - PFAPA patient's serum sensitizes monocytes to LPS

G Simon^{1*}, N Busso¹, A von Scheven-Gete², A So¹, M Hofer²

From 7th Congress of International Society of Systemic Auto-Inflammatory Diseases (ISSAID) Lausanne, Switzerland. 22-26 May 2013

Introduction

PFAPA is a pediatric auto-inflammatory syndrome of unknown etiology, characterized by recurrent fever, aphthosis, pharyngitis and cervical adenitis. Dysregulated monocyte interleukin-1 beta (IL-1 β) secretion is thought to play an important role in fever flares.

Objectives

We hypothesized that factor(s) present in the serum of PFAPA patients during a fever flare may induce monocytes to secrete IL-1 β which prolongs symptoms.

Methods

Serum of three controls (CTRL) or PFAPA patients collected during (PFAPA-IN) and between (PFAPA-OUT) flares were incubated with monocytes isolated from healthy volunteers (n=3) and stimulated with ultra pure lipopolysaccharide (LPSup). IL-1 β , TNF- α and IL-6 levels were measured by ELISA comparing serum stimulation alone and the impact of serum pre-incubation on LPSup induced cytokines.

Results

Serum-alone treatment of monocytes did not induce any detectable increase in IL-1 β , TNF- α or IL-6 secretion. However, pre-treatment with PFAPA-IN serum did result in significantly more IL-1 β secretion following LPSup stimulation as compared to PFAPA-OUT serum pretreatment (330.8 ± 181.5 and 173.5 ± 100.1 pg/ml respectively; n=9; p<0.05). There was no modulation in the levels of TNF- α and IL-6 under the present conditions, arguing for a process specific for the IL-1 β pathway.

Conclusion

Incubation of healthy donor monocytes with serum collected during a PFAPA flare increases the capacity of monocytes to secrete IL-1 β through TLR4 ligation. The identity of the molecule(s) and the mechanism of action of this observation still remain to be elucidated.

Disclosure of interest

None declared.

Authors' details

¹CHUV / Rhumatology, Lausanne, Switzerland. ²CHUV / Pediatrics, Lausanne, Switzerland.

Published: 8 November 2013

doi:10.1186/1546-0096-11-S1-A230

Cite this article as: Simon et al.: PW03-004 - PFAPA patient's serum sensitizes monocytes to LPS. *Pediatric Rheumatology* 2013 11(Suppl 1):A230.

Submit your next manuscript to BioMed Central and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit



¹CHUV / Rhumatology, Lausanne, Switzerland
Full list of author information is available at the end of the article