

## Is there any relationship between the exposure to mycophenolic acid and the clinical status in children with lupus?

C. Jurado, Brigitte Bader-Meunier, Bruno Ranchin, Stéphane Decramer, Michel Fischbac, Etienne Bérard, Franck Saint-Marcoux

► **To cite this version:**

C. Jurado, Brigitte Bader-Meunier, Bruno Ranchin, Stéphane Decramer, Michel Fischbac, et al.. Is there any relationship between the exposure to mycophenolic acid and the clinical status in children with lupus?. *Pediatric Rheumatology*, BioMed Central, 2011, 9 (Suppl 1), pp.P248. inserm-00624790

**HAL Id: inserm-00624790**

**<https://www.hal.inserm.fr/inserm-00624790>**

Submitted on 19 Sep 2011

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



POSTER PRESENTATION

Open Access

# Is there any relationship between the exposure to mycophenolic acid and the clinical status in children with lupus?

C Jurado<sup>1\*</sup>, B Bader-Meunier<sup>2</sup>, B Ranchin<sup>3</sup>, S Decramer<sup>4</sup>, M Fischbac<sup>5</sup>, E Bérard<sup>6</sup>, F Saint-Marcoux<sup>1</sup>

From 18th Pediatric Rheumatology European Society (PReS) Congress  
Bruges, Belgium. 14-18 September 2011

## Background

The clinical benefit of Therapeutic Drug Monitoring (TDM) of mycophenolate mofetil (MMF) when used in children with lupus (SLE) has been scarcely studied.

## Aim

(i) To model mycophenolic acid (MPA; the active moiety of MMF) pharmacokinetic profiles (PK); (ii) to explore the relationships between exposure indices to MPA and the clinical status in paediatric inpatients with SLE receiving a maintenance immunosuppressive therapy including MMF.

## Methods

We launched a non-interventional study with analysis of clinical, biological and pharmacokinetic information. Full-PK profiles of MPA were modelled using an iterative two-stage approach (1). The clinical status was defined by the SLEDAI, the SLE being considered active for a score  $\geq 6$ . Relationships between MPA through concentrations ( $C_0$ ), AUC (Area Under Curve) or AUC/dose values, and the disease's activity were studied using logistic regression analysis.

## Results

Twenty six children (aged 10 to 17) with SLEDAI score from 0 to 20 (median: 4) followed-up in 5 French centres were included. High PK interpatient variability was observed:  $AUC_{0-12h} = 40.51 \pm 20.49$  mg.h/L. Trough concentrations ( $C_0$ ) were poorly correlated

analysis reported: (i) no relationship between  $C_0$  and SLEDAI; (ii) patients with an  $AUC_{0-12h}/\text{dose} < 0.058$  h/L were more likely to have an active disease (OR=4.8; 95CI: 0.9-25.0;  $p=0.067$ ).

## Conclusion

A tendency to a relationship between the lupus activity and the global MPA exposure was observed. Further data are needed to develop PK tools that could estimate the AUC using a limited sampling strategy and to lead prospective trials testing the clinical impact of a MMF TDM based on the AUC.

## Author details

<sup>1</sup>Department of Pharmacology and INSERM UMR -S850, Limoges, France. <sup>2</sup>Departments of Pediatrics of: Hôpital Necker, AP-HP, Paris, France. <sup>3</sup>CHU Lyon, France. <sup>4</sup>CHU Toulouse, France. <sup>5</sup>CHU de Strasbourg, France. <sup>6</sup>CHU de Nice, France.

Published: 14 September 2011

## Reference

1. Saint-Marcoux F, *et al. Pharmacol Res* 2011.

doi:10.1186/1546-0096-9-S1-P248

**Cite this article as:** Jurado *et al.*: Is there any relationship between the exposure to mycophenolic acid and the clinical status in children with lupus? *Pediatric Rheumatology* 2011 **9**(Suppl 1):P248.

to the global exposure to MPA (AUC). Multivariate

<sup>1</sup>Department of Pharmacology and INSERM UMR -S850, Limoges, France  
Full list of author information is available at the end of the article