
Poster

[P26-6] P26-6: Immunosuppressive drugs (5): Clinical practice

Chair: Hege Christensen, Norway

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[P26-6-10] Towards therapeutic drug monitoring of mycophenolic acid in cicatricial pemphigoid patients

Jean-Baptiste Woillard¹, Pierre-Francois Maffioletti², Helene Roussel³, Caroline Monchaud⁴, Franck Saint-Marcoux⁵, Safae Assikar⁶, Pierre Marquet⁷, Christophe Bedane⁸ (1.CHU Limoges, Univ Limoges, 2.CHU Limoges, 3.CHU Limoges, 4.CHU Limoges, Univ Limoges, 5.CHU Limoges, 6.CHU Limoges, 7.CHU Limoges, Univ Limoges, 8.CHU Limoges)

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Background

Mycophenolate mofetil (MMF) is the reference immunosuppressant for the treatment of cicatricial pemphigoid (CP), a rare disease belonging to the group of autoimmune bullous dermatoses. Currently, therapeutic drug monitoring (TDM) of mycophenolic acid (MPA), the active compound of MMF, is not performed whereas all the arguments in favour of TDM are represented. The aim of this study was to investigate retrospectively the exposure/effect relationship based on the area under the curve (AUC) in CP patients.

Methods

Eight patients of whom 5 had at least more than one AUC measurement (n=15 measurements), treated for CP in Limoges University Hospital by MMF for at least 1 month, were included in this study. Daily MPA AUC was estimated using the Bayesian method on our ISBA website using a model developed for lupus patients (www.pharmaco.chu-limoges.fr). Inter and intra-individual variability was evaluated using ANOVA. Exposure was compared between the response group (categorized either as improvement, stabilization or non-response) using a Kruskal Wallis test. Finally, an AUC threshold was investigated for improvement using the ROC curve.

Results

Out of the eight patients, five were female and three male. The mean age was 79 years. One patient was a non-responder (n=2 measurements), while one was stable (n=3 measurements) and six showed improvement (n=10 measurements). A significant difference of exposure between the patients was observed whereas the within patient variability was low (p=0.033). A significant difference in exposure was observed between the response categories (mean AUC0-24h improvement = 98 mg*h/L, stabilization = 74.5 mg*h/L and non-response = 69 mg*h/L; pKruskal-Wallis=0.0498). ROC curve analysis showed that a threshold of 88 mg*h/L for AUC0-24h was associated to a sensibility of 80% and a specificity of 100% (AUC ROC=0.9, p=0.0001) for improvement (i.e. all the AUC0-24h higher than this threshold showed improvement while 80% of the AUC below did not.)

Conclusions

These results show that all the conditions are present for routine TDM of MPA. These results have to be confirmed in a prospective study which just began in December 2016 (the PEMPA study for which an inter-regional clinical research hospital project has been obtained).

