

### **MEETING ABSTRACT**



# New insights in vitiligo: cellular immune response

Natasha Ferraroni<sup>1\*</sup>, Rosemeire Navickas Constantino-Silva<sup>2</sup>, Camila Cacere<sup>2</sup>, Juliano Cesar Barros<sup>3</sup>, Rafael Aragon Cabrera<sup>3</sup>, Anete Grumach<sup>2,4</sup>, Carlos D'apparecida Santos Machado Filho<sup>3</sup>

*From* 3rd WAO International Scientific Conference (WISC) 2014 Rio de Janeiro, Brazil. 6-9 December 2014

#### Background

Vitiligo is a skin disorder that affects 1% to 2% of the world population, independently of ethnicity. It presents with white plaques and skin discoloration. The presence of antibodies against melanocytes confirms the autoimmune phenomena in this disease. Regarding cellular imune response in active vitiligo, it seems to be an imbalance between T cell CD8+ and CD4+, and, more-over, an altered expression of Natural Killer (NK) in periphery, although very few data are available. We evaluated the cellular immune effect (T cell expression) in peripheral blood in vitiligo patients who received antigenic stimulus (autologous graft), in comparison with patients with inactive Vitiligo who received autologous graft in comparison with patients with active Vitiligo without grafting.

#### Methods

Antigenic stimulus was done with autologous skin graft (Punch 3mm): substitution of vitiligo area with normal skin in group A (inactive vitiligo patients), and group B (active vitiligo patients). Group C: healthy individuals. Quantitative numbers of T lymphocytes subpopulations (CD3, CD4, CD8) and NK cells (CD16, CD56, CD94, CD158a) were determined by Flow cytometry. (CD94+ refers as an inhibitor receptor expressed in NK cells, CD158+ refers as an apoptosis receptor in NK cells).

#### Results

Three groups were evaluated: A) Inactive vitiligo patients engrafted (n=10); B) active vitiligo patients without engraftment (n=10) and C) healthy individuals (n=10). The evaluation was performed on days 0,+8,+30, +60 after skin engraftment. There was no difference of CD3+CD4+ among all groups. CD3+CD8+ was lower in patients with active vitiligo (p=0.003), CD94+ was lower

<sup>1</sup>Hospital De Base Do Distrito Federal, Brazil Full list of author information is available at the end of the article in patients with inactive vitiligo (p=0.01), both comparing to healthy individuals. CD158+ was higher in patients with active vitiligo, although there was no statistically significance.

#### Conclusions

Data suggests that cytotoxic activity of NK cells may be down regulated in patients with active vitiligo.

#### Acknowledgements

Supported by FAPESP (Fundação de Amparo à Pesquisa do Estado de São Paulo).

#### Authors' details

<sup>1</sup>Hospital De Base Do Distrito Federal, Brazil. <sup>2</sup>Laboratory of Clinical Immunology, Center of Research, Brazil. <sup>3</sup>Outpatient Group of Vitiligo, Brazil. <sup>4</sup>Outpatient Group of Recurrent Infections, Brazil.

Published: 8 April 2015

doi:10.1186/1939-4551-8-S1-A137 Cite this article as: Ferraroni *et al.*: New insights in vitiligo: cellular immune response. *World Allergy Organization Journal* 2015 **8**(Suppl 1): A137.

## 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

) BioMed Central

Submit your manuscript at www.biomedcentral.com/submit



© 2015 Ferraroni et al; licensee BioMed Central Ltd. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The Creative Commons Public Domain Dedication waiver (http://creativecommons.org/publicdomain/zero/1.0/) applies to the data made available in this article, unless otherwise stated.