

Neurosciences et Psyché/NEU-13

Role of disease activity for decision making ability in early multiple sclerosis

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Background and purpose: Decision making (DM) has been defined as the process through which a person forms preferences, selects and executes actions, and evaluates the outcome related to a selected choice. This ability represents an important factor for adequate behaviour in everyday life. DM impairment in multiple sclerosis (MS) has been previously reported. The purpose of the present study was to assess DM in patients with MS at the earliest clinically detectable time point of the disease.

Methods: Patients with definite (n=109) or possible (clinically isolated syndrome, CIS; n=56) MS, a short disease duration (mean 2.3 years) and a minor neurological disability (mean EDSS 1.8) were compared to 50 healthy controls aged 18 to 60 years (mean age 32.2) using the Iowa Gambling Task (IGT). Subjects had to select a card from any of 4 decks (A/B [disadvantageous]; C/D [advantageous]). The game consisted of 100 trials then grouped in blocks of 20 cards for data analysis. Skill in DM was assessed by means of a learning index (LI) defined as the difference between the averaged last three block indexes and first two block indexes ($LI = [(BI-3+BI-4+BI-5)/3 - (BI-1+BI-2)/2]$). Non parametric tests were used for statistical analysis.

Results: LI was higher in the control group (0.24, SD 0.44) than in the MS group (0.21, SD 0.38), however without reaching statistical significance (p=0.7). Interesting differences were detected when MS patients were grouped according to phenotype. A trend to a difference between MS subgroups and controls was observed for LI (p=0.06), which became significant between MS subgroups (p=0.03). CIS patients who confirmed MS diagnosis by presenting a second relapse after study entry showed a dysfunction in the IGT in comparison to the other CIS (p=0.01) and definite MS (p=0.04) patients. In the opposite, CIS patients characterised by not entirely fulfilled McDonald criteria at inclusion and absence of relapse during the study showed an normal learning pattern on the IGT. Finally, comparing MS patients who developed relapses after study entry, those who remained clinically stable and controls, we observed impaired performances only in relapsing patients in comparison to stable patients (p=0.008) and controls (p=0.03).

Discussion: These results raise the assumption of a sustained role for both MS relapsing activity and disease heterogeneity (i.e. infra-clinical severity or activity of MS) in the impaired process of decision making.



Research Day

January 17, 2008
César Roux Auditorium

Regenerative Medecine

Unil

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Faculté de biologie
et de médecine



CHUV RESEARCH DAY 2008
Thursday, January 17th, 2008
“Regenerative Medicine”

08:30 Presentation of the 2008 Research Day
Professor Ivan Stamenkovic, Vice Dean for Research

08:45 **Keynote
speaker 1**



Professor Philippe Menasché
Department of Cardio-Vascular Surgery
Hôpital Européen G. Pompidou, Paris
“Promises and pitfalls of skeletal myoblast therapy”

09:30 **Coffee & Posters**

10:30 6 short talks

12:00 **Keynote
speaker 2**



Professor Giulio Cossu
Stem Cell Research Institute, Milano
“Towards a cell therapy for muscular dystrophy”

12:45 **Lunch, Coffee & Posters**

14:00 **Keynote
speaker 3**



Professor Michele De Luca
Department of Biomedical Sciences, Modena
Epithelial Stem Cell Research Centre, Venice
“Epithelial stem cells and regenerative medicine”

14:45 6 short talks

16:15 **Coffee & Posters**

17:00 **Keynote
speaker 4**



Professor Lior Gepstein
Dept of Physiology & Biophysics, Technion – Haifa,
Israel
*“Myocardial Regeneration by Human Embryonic
Stem Cells”*

17:45 Poster Prizes Ceremony

18:00 **Apéritif & Buffet**

ATTENDANCE IS FREE - NO REGISTRATION IS NECESSARY

NOTE: Posters will be displayed from
Wednesday January 16st early morning to Friday January 18th early morning.

12 short talks

Schedule	Names, departments	Titles
Morning		
10h30 - 10h45	Boris Hinz Laboratoire de biophysique cellulaire - EPFL	<i>"The myofibroblast - friend and foe in tissue regeneration"</i>
10h45 - 11h00	Matthias Lutolf Laboratoire de cellules souches et bioengineering - EPFL	<i>"Bioengineering artificial stem cell niches".</i>
11h00 - 11h15	Corinne Kostic Unité de thérapie génique et biologie des cellules souches – Hôpital Ophtalmique	<i>"Gene therapy preclinical studies for Leber congenital amaurosis"</i>
11h15 - 11h30	Anne Zurn Chirurgie expérimentale - CHUV	<i>"Delayed peripheral nerve priming improves regeneration of sensory axons into the spinal cord following dorsal root injury."</i>
11h30 - 11h45	Meta Djojosebroto Unité de thérapie génique et biologie des cellules souches – Hôpital Ophtalmique	<i>"Increased chromosomal aberrations and transformation of adult mouse retinal stem cells"</i>
11h45 - 12h00	Paola Bonfanti Chirurgie expérimentale - CHUV & Laboratoire de dynamique des cellules souches - EPFL	<i>"Thymic epithelial cells have skin potency"</i>
Afternoon		
14h45 - 15h00	Dominique Pioletti Laboratoire de biomécanique en orthopédie - EPFL	<i>"In Vivo evaluation of human fetal cells as allogenic cell source for tissue engineering"</i>
15h00 - 15h15	Mikaël Martino Laboratoire de médecine régénérative et de pharmacobiologie - EPFL	<i>"Controlling mesenchymal stem cells response to biomaterials with recombinant integrin- specific fibronectin fragments"</i>
15h15 - 15h30	Dela Golshayan Néphrologie et Centre de Transplantation d'organes - CHUV	<i>"Mechanisms of Allograft rejection and tolerance in transplantation"</i>
15h30 - 15h45	Jonathan Bloch Médecine Interne - CHUV	<i>"Spleen derived vascular progenitor cell transfer restores metabolic and vascular insulin sensitivity in high-fat diet insulin resistant mice"</i>
15h45 - 16h00	Marc-Etienne Roehrich Cardiologie – CHUV	<i>"Immunophenotypical analysis of putative cardiac progenitor cells isolated based on high ALDH activity from adult mouse and human hearts"</i>
16h00 - 16h15	Mohamed Nemir Dpt de Médecine - CHUV	<i>"Control of cardiac integrity via the Notch1 receptor pathway".</i>