S49.3

CSF tau phosphorylated at threonine 231, total tau and neuronal thread protein in the diagnosis of Alzheimer's disease

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Background: One of the major neuropathological hallmarks of Alzheimer's disease (AD) are neurofibrillary tangles composed of paired helical filaments (PHF). The principal protein subunit of PHF is abnormally hyperphosphorylated tau (p-tau). An elevation of the unspecific total tau protein level (t-tau) in the cerebrospinal fluid (CSF) has been reported in AD. However, there is still considerable overlap of values between AD and relevant controls. Promising efforts are under way to establish biological markers to improve diagnostic accuracy of AD. A major line is combining tau with other disease related proteins and analysing the more specific p-tau in CSF. Phosphorylation of tau at threonine 231 (p-tau231) appears specific and very early in AD and preceeds paired helical filament assembly.

Methods: For t-tau, gp130 and AD7C-NTP we used a commercially available enzyme-linked immunosorbent assay (ELISA)(1–3). P-tau was measured by a newly developed ELISA specific for tau phosphorylated at threonine 231 (4).

Results: T-tau was increased in AD compared to HC. Based on a previously established cut-off of 260 pg/ml, the discriminative power of t-tau was higher in the young old than in the old old subjects. ROC-analysis revealed a higher correct classification rate in the young old (1). A stepwise multivariate discriminant analysis showed that t-tau and solublegp130 maximized separation between groups (2). The combined evaluation of t-tau and AD7C-NTP with discriminant analysis raised specificity (3). CSF levels of p-tau231 significantly improved separation compared to t-tau. P-tau231 was highly increased in AD compared to healthy age-matched controls, other neurological disorders and relevant dementia disorders with high sensitivity and specificity (4). We found a linear decrease only for p-tau231 during the course of AD. In addition, p-tau231 was inversely correlated with the MMSE-score at baseline, accelerating with AD progression (5). Interestingly, the majority of subjects with mild cognitive impairment showed p-tau231 levels above the cutoff that discriminated best between AD and HC.

Conclusion: Diagnostic accuracy could be improved by combining t-tau with age and additional proteins. CSF p-tau231 was particularly useful in early detection, differential diagnosis and mapping disease progression in subjects at risk and AD patients.

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S49.4

Tau, phospho-tau and Ab42 in cerebrospinal fluid in Alzheimer's disease

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The possibility to provide Alzheimer's disease (AD) patients symptomatic treatment with AChE inhibitors has made patients seek medical advice very early in the course of the disease, when symptoms are vague and difficult to distinguish from memory problems associated with normal aging. This has created a great need for biochemical diagnostic markers of AD. Forthcoming disease-arresting drugs (e.g. β/γ-secretase inhibitors) will make this need even larger.

Numerous studies have found an increase in CSF total tau (T-tau) and a decrease in CSF Aβ42 in AD, with sensitivity figures ≈90%. The specificity is also high against normal aging, depression, and Parkinson's disease, but lower against other dementias. The addition of phospho tau (P-tau) increases the specificity, since increased levels are not found in other dementias (e.g. frontotemporal dementia). These CSF-markers are positive in patients with mild cognitive impairment whom will progress to AD.

We use CSF-tau and CSF-Aβ42 in clinical routine in our laboratory. CSF samples are sent for diagnostic purposes from clinicians all over Sweden and ELISAs are run each week as clinical neurochemical routine analyses. Also in this setting, the analytical variation is within the range expected for immunoassays, and we find high sensitivity and specificity figures also in unselected community-based patients.

CSF biomarkers may also be useful to monitor the biochemical effect of new potential therapeutic compounds. Catching the clinical effect of "disease-arresting" drugs that partly may slow down the degeneration will need very large patient materials and extended treatment periods. The biochemical effect may be identified much earlier and in much smaller patient samples, by analyzing specific CSF biomarkers before and after a shorter period of treatment. Data will be presented on the performance of these CSF-markers after treatment of AD patients with drugs, including AChE inhibitors and cholesterol-lowering agents (statins).

S49.5

Aβ42 plasma in the diagnosis of Alzheimer's disease

M. Riemenschneider. *Germany*

No abstract was available at the time of printing.

S50. Culture and refugee trauma

Chairs: M. Fernandez (S), A.J. Marsella (USA)

S50.1

Culture, trauma and refugees

A.J. Marsella*. *University of Hawaii, Honolulu, Hawaii, USA*

This presentation will review the current global situation regarding the growing numbers of international refugees and the complex

https://doi.org/10.1016/S0924-9338(02)80355-8 Published online by Cambridge University Press

circumstances and requirements involved in the assessment and treatment of trauma and related disorders among this high-risk group. Many of the world's 40 million refugees and internally displaced people are victims of torture, rape, brutality, and severe deprivation. Their future is uncertain, and their lives are often lived from moment to moment in quiet anguish and despair fighting poverty, pestilence, and disease. For those refugees fortunate enough to reach the haven of a refugee camp, there are new problems to be faced, problems of living in tent cities with meagre food and medical resources and the risk of violence. And for those few refugees fortunate enough to be admitted to a host country, there are the new problems to be overcome – problems of acculturation, racism, language, work, housing, health, and personal safety. For many refugees, the process of rebuilding their lives often proves to be as traumatic as the dislocation process from which they sought refuge. The assessment and treatment of trauma and related disorders among refugees is often complicated by profound cultural variations in the meaning and clinical parameters (e.g., onset, expression, course) of trauma-related disorders. It is essential that professionals working with refugee populations understand both the nature and consequences of trauma among refugees as well as the differing requirements for assessment and treatment.

For many of these refugees, populations

SOME CROSS-CULTURAL ISSUES

A. Diagnosing PTSD Across Cultures (Idioms of Distress, Translation, Rule Out)?
B. Nature of Trauma(s): Role of Destiny, Religion, Collective Trauma)?
C. Universal Symptoms: Re-Experiencing and Arousal

S50.2
Caring for survivors of torture

I. Genefke*. *Denmark*

No abstract was available at the time of printing.

S50.3
War trauma in Sarajevo

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In accordance of our researches within civil psychotraumatic population during the war and under a siege for a longer time, it is obvious that habitants of Sarajevo were suffering in different way as we expected according to other experience in the world. It seems to us that this appearance is consequences of the high city agglomeration and the conditions of the long-term siege. In that time we have a great interaction of citizens. We think that the community behaves as unified, but under permanent high risk of the death and other vital problems, and with very fast ability to interchange of all information (especially bad). We named this phenomenon as inductive community model. This is characteristic, also, with simultaneous mass manifestations of psychiatric disorders and its appearance in majority of population. To concept of this model we can confirm by our epidemiological investigations during and after the war.

Epidemiological researches that we are constantly running from 1979 in Department of Psychiatry in Sarajevo, confirms that specific for the citizens of Sarajevo were massive identical clinical pictures of reaction to severe stress and their course.

S50.4
The Chilean experience

M. Fernandez*. *Unit of Transcultural Psychiatry, University Hospital, Uppsala, Department of Neuroscience, Sweden*

This presentation will review the trauma of the Chilean Society during the dictatorship 1973–1990. On September 11, 1973, the Chilean Armed Forces staged a bloody military coup to overthrow the constitutionally elected government of President Allende. President Allende died in the La Moneda presidential palace, and his ministers and collaborators were arrested and sent to concentration camps. Many of them were later killed or made to disappear. General Pinochet ruled the country with iron fist for the next seventeen years. Human rights were repeatedly violated with the aim of annihilating the political opposition to the regime. According to Amnesty International and the United Nations' Human Rights Committee, 250 000 Chileans had been detained for political reasons by the end of 1973. The types of repression used in Chile by the military regime included: arbitrary arrest, imprisonment, torture, forced disappearances, summary executions, collective executions, the negation of the right to appeal War Council sentences, homicide, exile, internal exile, abduction, intimidation, attempted homicide, death treats, raids, dismissal from jobs and surveillance.

Hundreds thousands Chileans went to exile in Europe, North America or Australia.

The Rettig Report and the National Corporation for Reconciliation and Reparation, concluded in 1996 that a total of 3197 people died or went missing between September 11, 1973 and March 11, 1990 as a result of human rights violations at the hands of the state agents of repression. Of these 1102 classify as disappeared and 2095 as deaths.

The democratic government started in 1990 a special psychiatric and psychosocial program, PRAIS, for the victims of the military repression 1973–1990. The program has treated more than 50 000 person including 7000 with experience of torture.

S50.5
The meaning of refugee trauma and recovery during the asylum-waiting process

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Drawing on clinical field work in Sweden, this paper first presents a framework for understanding how psychosocial and existential meaning-making systems are created, altered and implemented during the asylum-waiting process. Secondly, the paper explores how to make use of this framework in clinical and supportive therapeutic contexts. The framework takes into consideration how both challenges and resources are identified and addressed for the individual (family or group) in relation to both pre- and post-migration experiences of trauma and experiences of existential resources. Special attention is given to the therapeutic function of positive ritual experience in the asylum-waiting period. The framework includes a means of analysis of the socio-cultural as well as political dimensions of policy and praxis within the host country towards refugees in general and towards specific groups in particular, and the impact of such in the individual refugee's meaning-making systems.

https://doi.org/10.1016/S0924-9338(02)80355-8 Published online by Cambridge University Press