provided by Electronic Archive of the Ukrainian Medical..

Громадська організація «Південна фундація медицини»

ЗБІРНИК ТЕЗ НАУКОВИХ РОБІТ

УЧАСНИКІВ МІЖНАРОДНОЇ НАУКОВО-ПРАКТИЧНОЇ КОНФЕРЕНЦІЇ

КЛЮЧОВІ ПИТАННЯ НАУКОВИХ ДОСЛІДЖЕНЬ У СФЕРІ МЕДИЦИНИ У XXI СТ.

15-16 квітня 2016 р.

Одеса 2016

ЛІТЕРАТУРА

- 1. Возианова Ж.И. Инфекционные и паразитарные болезни: в 3 т. К.: Здоров'я, 2002. T. 3. C. 115-137.
- 2. Прилуцкий А.С. Диагностика врожденной и приобретенной цитомегаловирусной инфекции // Лабор. диагностика. 2002. № 3. С. 6–10.
- 3. Юлиш Е.И., Волосовец А.П. Врожденные и приобретенные ТОРСН-инфекции у детей. Донецк: Регина, 2005. 215 с.
- 4. Ершова И.Б., Санина Е.В., Бойченко П.К. Цитомегаловирусная инфекция // Здоровье Украины. 2004. № 11-12. С. 28

Tkachenko E. V.

candidate of medical sciences, Physiology chair assistant

El Alaoui Youness student

Khalafalla Ahmed

student

Higher State Educational Establishment of Ukraine «Ukrainian medical stomatological academy», Poltava

Sartipi Hamed Nosratolla

student

the 1st course of post-graduating faculty in Hamedan medical university by speciality «Dentistry», Hamedan, Iran

INTERHEMISPHERICAL ASYMMETRY INDIVIDUAL PROFILE, PSYCHOLOGICAL AND PSYCHIC PROBLEMS AND PECULIARITIES

Sinistrality belongs to such a phenomenon rate and importance of which got increased during last years (sinisters amount together with ambidexters is approximately 20%). Interest to sinistrality as a phenomenon grows in many branches of theoretical and practical medicine. The beginning age of epilepsy is earlier for the left-handers, electroencephalography patterns do not depend on the beginning age, febrile states, the disease presence in the family, sinistrality and other factors in them (comparatively to the dexters where these factors are influencive) [14, 137-141]. Some doctors consider that epilepsy is wider-spread in left-handers than in right-handers [3, 429-440; 27, 93-102]. Intellectual disability in children is considered to be connected to the sinistrality [20, 492-500] and dyslexias as well though some scientists consider it only as special way of the people's reading [10, 285-286]. Some scientists consider that apraxy (impossible skills development) deals to sinistrality while the others link its hardness with dexterity on the contrary [12, 2592-2601]. Opinions as for trisomy 21 are also not one-digit. Some

scientists think that its distribution is bigger in the left-handers [6, 365-376; 11, 482-491], the others – in right-handers [19, 113-120; 9, 1758-1772]. There was a research of Down syndrome suffered children from Iran comparatively to healthy right-handers on their language perception laterality pattern [16, 135-152]. Other chromosomal aberrations are also thought to be more distributed in the left-handers comparatively to the right-handers [5, 413-422].

Ambidextrism or mixed-handedness is rather «non-comfortable» state for human being because he/she «can not decide what hemisphere to use». They can have language, scholastic, and mental health problems in childhood and that these persist into adolescence [23, 340-348]. They have atrophy of hippocamp and amygdale in old people [7, 125-134]. According to some data having been received in Austria [17, 150-168], shizophreny is observed more in men dexters and women ambidexters; other Australian scientists [8, 143-152] determined direct link between ambidextrism and shizophreny; though there are data of Taiwan scientists [27, 690-706] that this disease is met in bigger extent in left-handers with increased risk in sinisters men and ambidexters, as Japanese scientists demonstrated [13, 139-145]. One can say about cross-cultural character of shizotype in ambidexters [15, 476-490].

Autism can be described as a disease of left-handers [22, 613-634] together with prozopagnosies (faces disordered recognition) [4, 2583-2589], mirror writing (English scientists study this phenomenon much) [25, 5-13].

There is a hypothesis about pathological right-handedness: temporal epilepsy is accompanied by early damaging the right hemisphere that leads to left hand hypofunction in real weak right-handers that makes them to switch strong right-handedness on. It can be, to the Korean scientists point of view, the first statement for mentioned hypothesis [18, 510-515]. There is a description of so-called Gerstmann syndrome (dyscalculia, dysgraphia, left-right confusion, finger agnosia) in right-handers by scientists from the USA [2, 823591], France [24, 716-727]. One American scientist includes semantic aphasia instead of agraphia in this syndrome [1, 828-833]. Severe disorder of right-handed including somatoparaphrenia or very big mistakes in body and body parts imaging was described by the scientists from Switzerland [21, 175-179].

Our work object was Iranian and Egyptian students of UMSA medical and dental faculty for 10 years. Very important conclusions of our observations were that both Iranian and Egyptian left-handers were much harder or even impossible to solve the tests comparatively to the right-handers. It is explained by left-handers dominant right hemisphere physiological peculiarity – simultant, but not successive, thinking pathway. It was characteristic for real, hidden and non-real sinisters though was more expressive for the hidden and non-real ones. There were bigger amounts of ambidexters among Iranian students comparatively to the Egyptian ones. The ambidextrous students from both countries were especially good while giving individual tasks, based on artistism, these students were capable to solve the tests easily and to show good and excellent results in oral asking while vast intradisciplinary and interdisciplinary integration making. We had an experience of «opened classes» performed by ambidexterous students with their involving all the students in work, with the «students-teachers» proposing and implementing the new forms of work based on interactive ways of study, compiling the new different-leveled tests and tasks in part.

Thus our work emphasizes excessive time the necessity to take into account the students' interhemispherical asymmetry individual profile in pedagogical activity with individual approach creating in maximal possible extent.

LITERATURE

- 1. Ardila A. A proposed reinterpretation of Gerstmann's syndrome /A.Ardila //Arch Clin Neuropsychol.-2014 Dec.-Vol.29, N.8.-P.828-833.
- 2. Bhattacharyya S. Dyscalculia, dysgraphia, and left-right confusion from a left posterior peri-insular infarct /S. Bhattacharyya, X.Cai, J.P.Klein //Behav Neurol.-2014.-N.2014.-P.823591.
- 3. Bryden P.J. Handedness and health: an examination of the association between different handedness classifications and health disorders / P.J.Bryden, J.Bruyn, P.Fletcher //Laterality.-2005 Sep.-Vol.10, N.5.-P.429-440.
- 4. Bukowski H. Cerebral lateralization of face-sensitive areas in left-handers: only the FFA does not get it right H.Bukowski, L.Dricot, B.Hanseeuw, B.Rossion //Cortex,-2013 Oct.-Vol.49, N.9.-P.2583-2589.
- 5. Carlier M. Laterality preference and cognition: cross-syndrome comparison of patients with trisomy 21 (Down), del7q11.23 (Williams-Beuren) and del22q11.2 (DiGeorge or Velo-Cardio-Facial) syndromes /M.Carlier, A.G.Desplanches, N.Philip, S.Stefanini, S.Vicari, V.Volterra, C.Deruelle, G.Fisch, A.L.Doyen, A.Swillen //Behav Genet.-2011 May.-Vol.41, N.3.-P.413-422.
- 6. Carlier M. Laterality in persons with intellectual disability. Do patients with trisomy 21 and Williams-Beuren syndrome differ from typically developing persons? /M.Carlier, S.Stefanini, C.Deruelle, V.Volterra, A.L.Doyen, C.Lamard, V. de Portzamparc, S.Vikari, G.Fisch //Behav Genet.-2006 May.-Vol.36, N.3.-P.365-376.
- 7. Cherbuin N. Mixed handedness is associated with greater age-related decline in volumes of the hippocampus and amygdala: the PATH through life study N.Cherbuin, P.S.Sachdev, K.J.Anstey //Brain Behav.-2011 Nov.-Vol.1, N.2.-P.125-134.
- 8. Dragovic M. Schizotypy and mixed-handedness revisited /M.Dragovic, G.Hammond, A.Jablensky //Psychiatry Res.-2005 Sep.-Vol.136, N.2-3.-P.143-152.
- 9. Floris D.L. Psychological correlates of handedness and corpus callosum asymmetry in autism: the left hemisphere dysfunction theory revisited /D.L.Floris, L.R.Chura, R.J.Holt, J.Suckling, E.T.Bullmore, S.Baron-Cohen, M.D.Spencer //J Autism Dev Disord.-2013 Aug.-Vol.43, N.8.-P.1758-1772.
- 10. Friedmann N. An even more universal model of reading: various effects of orthography on dyslexias /N.Friedmann, A.Gvion //Behav Brain Sci.-2012 Oct.-Vol.35, N.5.-P.285-286.
- 11. Gérard-Desplanches A. Laterality in persons with intellectual disability II. Hand, foot, ear, and eye laterality in persons with Trisomy 21 and Williams-Beuren syndrome /A. Gérard-Desplanches, C.Deruelle, S.Stefanini, C.Ayoun, V.Volterra, S.Vicari, G.Fisch, M.Carlier //Dev Psychobiol.-2006 Sep.-Vol.48, N.6.-P.482-491.
- 12. Goldenberg G. Apraxia in left-handers /G.Goldenberg //Brain.-2013 Aug.-Vol.136 (Pt 8).-P.2592-2601.
- 13. Gregory A.M. Handedness and schizotypy in a Japanese sample: an association masked by cultural effects on hand usage /A.M.Gregory, G.Claridge, K.Clark, P.D.Taylor //Schizophr Res.-2003 Dec.-Vol.65, N.2-3.-P.139-145.

- 14. Holmes M.D. Is the left cerebral hemisphere more prone to epileptogenesis than the right /M.D.Holmes, C.B.Dodrill, R.L.Kutsy, G.A.Ojemann, J.W.Miller //Epileptic Disord.-2001 Sep.-Vol.3, N.3.-P.137-141.
- 15. Hui-Chun T. The cross-cultural nature of the relationship between schizotypy and mixed-handedness /T.Hui-Chun, J.C.Wei, K.Shu-Yu, H.Po-Chang //Laterality: Asymmetries of Body, Brain and Cognition.-2013.-Vol.18.-Iss.4.-P.476-490.
- 16. Jahangiri N. The comparison of laterality pattern of language perception in Down syndrome and typical children /N.Jahangiri, Z.Rouhi //Journal of language and literature faculty of letters and humanities (Journal of faculty of letters and humanities (Language and Literature)).-Winter 2008.-Vol.40, N.4, Iss.159.-P.135-152.
- 17. Kelley M.P. Lateral preference and schizotypy revisited: comparison of handedness measurement and classification methods /M.P.Kelley //Laterality.-2012.-Vol.17, N.2.-P.150-168.
- 18. Kim H. Evidence for the pathological right-handedness hypothesis /H.Kim, S.Yi, E.I.Son, J.Kim //Neuropsychology.-2001 Oct.-Vol.15, N.4.-P.510-515.
- 19. Knaus T.A. Language laterality in autism spectrum disorder and typical controls: a functional, volumetric, and diffusion tensor MRI study /T.A.Knaus, A.M.Silver, M.Kennedy, K.A.Lingren, K.C.Dominick, J.Siegel, H.Tager-Flusberg //Brain Lang.—2010 Feb.-Vol.112, N.2.-P.113-120.
- 20. Leconte P. Lateral preferences in children with intellectual deficiency of idiopathic origin /P.Leconte, J.Fagard //Dev Psychobiol.-2006 Sep.-Vol.48, N.6.-P.492-500.
- 21. Perren F. «Crossed» somatoparaphrenia: an unusual new case and a review of the literature /F.Perren, L.Heydrich, O.Blanke, T.Landis //Exp Brain Res.-2015 Jan.-Vol.233, N.1.-P.175-179.
- 22. Preslar J. Autism, lateralisation, and handedness: a review of the literature and meta-analysis /J.Preslar, H.I.Kushner, L.Marino, B.Pearce //Laterality.-2014.-Vol.19, N.1.-P.64-95., Akshoomoff N. The neurobiological basis of autism from a developmental perspective /N.Akshoomoff, K.Pierce, E.Courchesne //Development and Psychopathology.-2002.-Vol.14.-P.613-634.
- 23. Rodriguez A. Mixed-handedness is linked to mental health problems in children and adolescents /A.Rodriguez, M.Kaakinen, I.Moilanen, A.Taanila, J.J.McGough, S.Loo, M.R. Järvelin //Pediatrics.-2010 Feb.-Vol.125, N.2.-P.340-348.
- 24. Roux F.E. writing, calculating, and finger recognition in the region of the angular gyrus: a cortical stimulation study of Gerstmann syndrome /F.E.Roux, S.Boetto, O.Sacko, F.Chollet, M.Trémoulet //J Neurosurg.-2003 Oct.-Vol.99, N.4.-P.716-727.
- 25. Schott G.D. Mirror writing: neurological reflections on an unusual phenomenon /G.D.Schott //J Neurol Neurosurg Psychiatry.-2007 Jan.-Vol.78, N.1.-P.5-13.
- 26. Stewart C.C. Predictors of Language Lateralization in Temporal Lobe Epilepsy /C.C.Stewart, S.J.Swanson, D.S.Sabsevitz, M.E.Rozman, J.K.Janecek, J.R.Binder //Neuropsychologia.-2014 Jul.-P.93-102.
- 27. Tsuang H.C. Handedness and schizotypy in non-psychotic relatives of patients with schizophrenia /H.C.Tsuang, C.M.Liu, T.J.Hwang, M.H.Hsieh, S.V.Faraone, M.T.Tsuang, H.G.Hwu, W.J.Chen //Laterality.-2011 Nov.-Vol.16, N.6.-P.690-706.