



มูลนิธิวิทยาศาสตร์ ไอศไต้น์ และ เทสลา
Albert Einstein and Nikola Tesla Scientific Foundation

“Towards a Better Society through Science and Technology”

**PRETERM BIRTH BY CAESAREAN SECTION (PCS) MAY CAUSE LONG
TERM ADVERSE IMPACTS ON INFANT’S IMMUNE SYSTEM
DEVELOPMENT AND LEAD TO FUTURE MENTAL DISORDERS DUE TO
RETARDATION AND IMBALANCES OF NEURAL SIGNAL
TRANSMISSION.**

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Institution: Albert Einstein & Nicola Tesla Scientific Foundation

Submission date: August 25 2010

Presentation date: October 27 2010

Event: The 36th Congress on Science and Technology of Thailand, BITEC

Organizer: The Science Society of Thailand Under the Patronage of His Majesty the King

AENT Links: <http://www.einsteinandtesla.com/>; <http://www.mybrainpoweronline.com/>

Abstract:

Prior studies of young subjects, aged from 4 up to 23, with serious immune and mental imbalances revealed associations with their preterm caesarean section childbirth events. The studies included the subjects with brain cells disorders, neurological dysfunctions, neurodegeneration - like metachromatic leukodystrophy, ataxia, as well as mental abnormalities, such as obsessive compulsive neurosis, learning disorders, and other progressive physiological disorders. The search for the origins of their health disorders lead our team to a discovery of the significant retardation of neural signal transmission in subjects born through preterm cesarean section. The retardation of the neural signaling leads to the inferior cellular communication that changes the adaptive capacity of the body & mind system responsible for reading, processing and storing the life information that controls homeostasis. Subjects born through the natural vaginal delivery did not show retardation of neural signaling at all. The finding may shed light on the human birth and development processes. This knowledge may help to improve the quality of life of future children, their families and society.

Key words: Bio medical research, life science, cesarean section, childbirth, immune and mental disorders, neural signal transmission, cellular communication, homeostasis.

Introduction

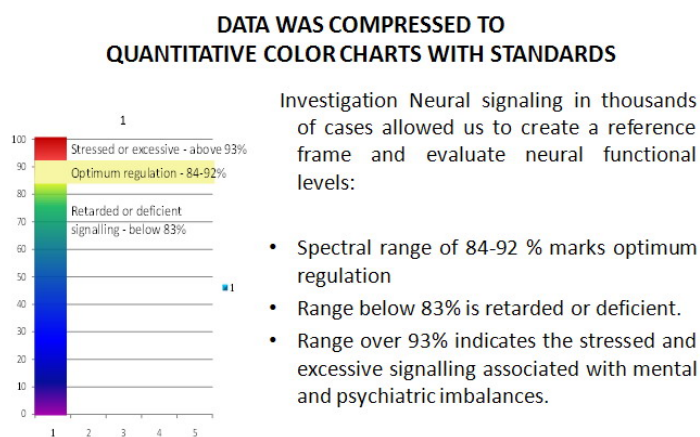
Method & protocol



Combination of modern technologies like MRI, EEG as well as devices measuring Ψ -wave function allowed us to develop a new method and protocol to decode and evaluate neural signaling that controls the homeostasis of biological systems.

Investigation of Neural signal patterns in thousands of cases allowed us to create a reference frame (Fig.1) and evaluate optimum functional levels (Fig 2-4):

- Spectral range of 84-92 % marks Optimum regulation
- Spectrum below 83% denotes the retarded or deficient functions
- Spectrum over 93% indicates the stressed and excessive signalling associated with mental and psychiatric impairments.



*Fig. 1. Reference frame with spectral ranges in percentage.
The optimum regulation level stays at 84-92 %.*

Fig. 1. Data was compressed to quantitative color charts with optimum standards

The neural signals were decoded and differentiated into specific groups associated with specific brain areas and their functional activities. Then the data was compressed to quantitative color charts (Fig. 2).

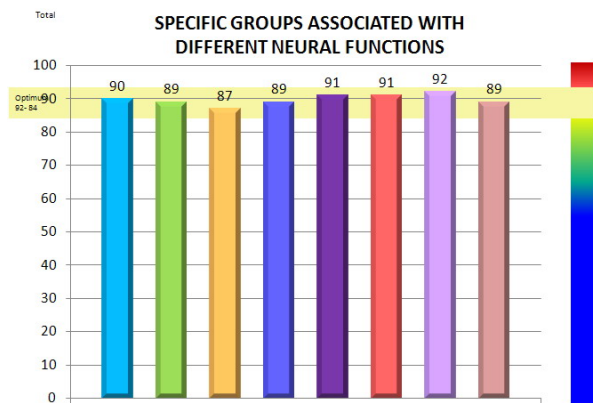
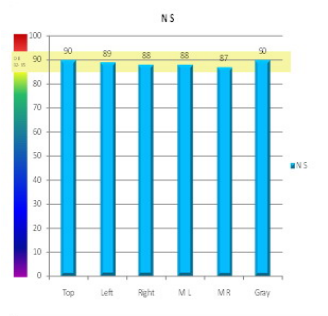


Fig. 2. Specific groups associated with different neural functions

From the acquired data we have distinguished neural signals NS-1 (Fig. 3) which is associated with dynamic equilibrium of cellular metabolism and NS-2 (Fig.4) associated with the learning and memory. In healthy subjects NS-1 and NS-2 stay at the level of optimum regulation.

NEURAL SIGNAL (NS-1)



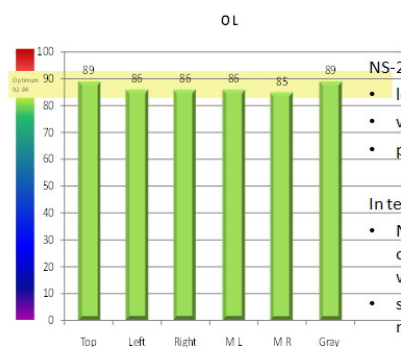
NS-1 is associated with:

- the real time neuro cellular communication
- that orchestrates bio neural dynamic equilibrium and
- governs the adaptive capacity of the body/mind system: metabolism and homeostasis.

NS-1 is balanced in different cerebral areas and functions at optimum level 84-92 %.

Fig.3. Neural signal NS- 2 in a healthy subject.

NEURAL SIGNAL (NS-2)



NS-2 is associated with

- learning and
- working memory
- processing the life information.

In terms of microbiology

- NS-2 is responsible for the recognition of the foreign agents and threats as well as
- support the immune functions to neutralize or eliminate the invaders.

NS-2 is balanced in different cerebral areas and stays at optimum level of 84-92 %.

Fig.4. Neural signal NS-2 in a healthy subject.

Below there is a visionary representation of neuron activity: optimum and deficient.

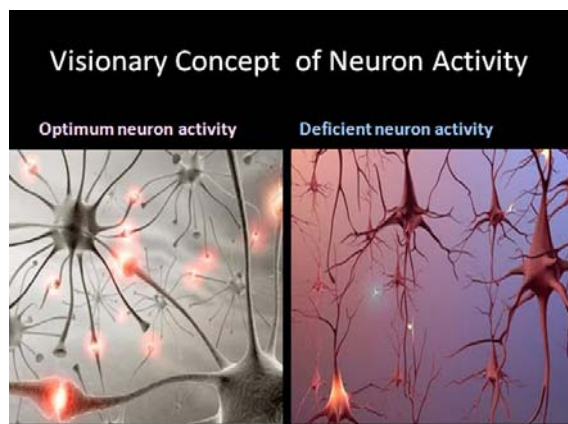


Fig .5. Visionary concept of neuron activity

The optimum functions of the two neural NS-1 and NS-2 are critical for the homeostasis in bio neural systems and adaptation.

Discussions

Part I

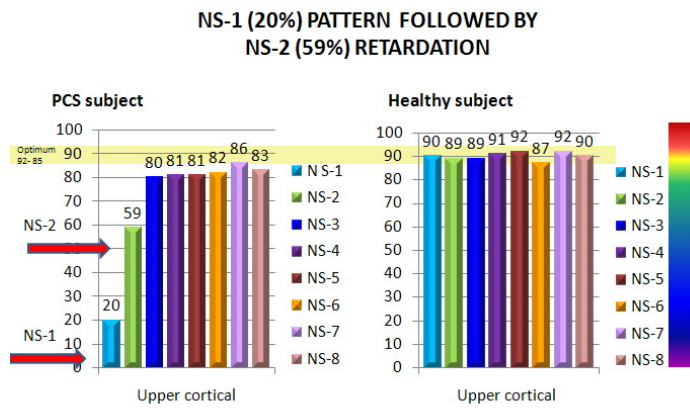
Neurological case study



After studies of several thousands of biometrical data we have discovered unusual delays of neural signal (NS-1) in several subjects. Further research allowed us to identify those subjects as born by PCS.

Studies of 12 PCS subjects revealed a striking retardation in NS-1 signaling channels down to 20% from the level of optimum regulation, which does not occur in non PCS subjects.

NS-1 (20%) deficient pattern is followed by NS-2 (59%) retardation



The above phenomena does not occur in non PCS subjects.

Fig. 6. NS-1 (20%) deficient pattern is followed by NS-2 (59%) retardation

NS-1 leads in hierarchy of neural signaling & influences other neural channels. NS-2 follows the NS-1 patterns and considerably declines from the optimum level, down to 59% in specific cases.

NS-1 IN PCS SUBJECTS AND IN NON PCS SUBJECTS: significant retardation and imbalances at cerebral areas

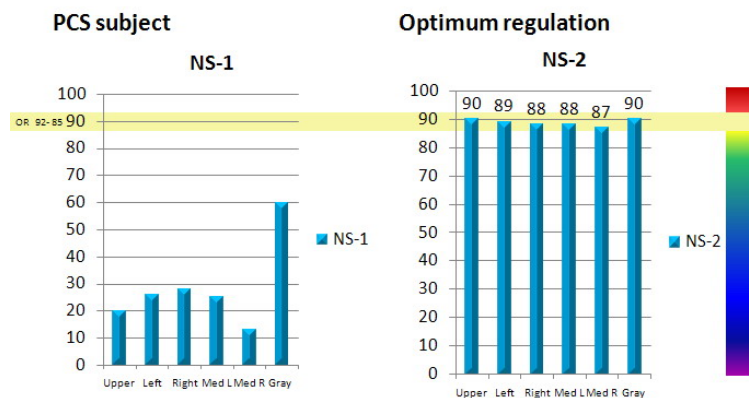


Fig.7. NS-1 in PCS subjects and in non PCS subjects: significant retardation and imbalances at cerebral areas

NS-2 closely follows the NS-1 patterns
and declines from the optimum levels down to 56-59%.

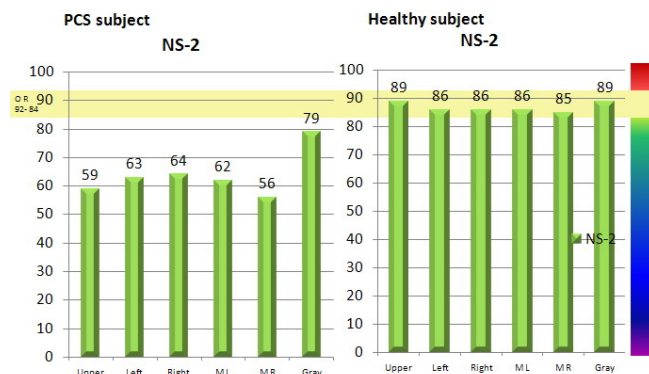


Fig. 8. NS-1 levels have been compared with the preterm delivery dates of PCS subjects.

The charts present the collective NS-1 levels of 12 PCS subjects: 11 subjects were delivered by PCS, 14, 10, 7 and 1 days before the time. One subject (Case 12) was delivered by CS after 10 hours of labor. NS-1 was registered at about normal-high range of 94%.

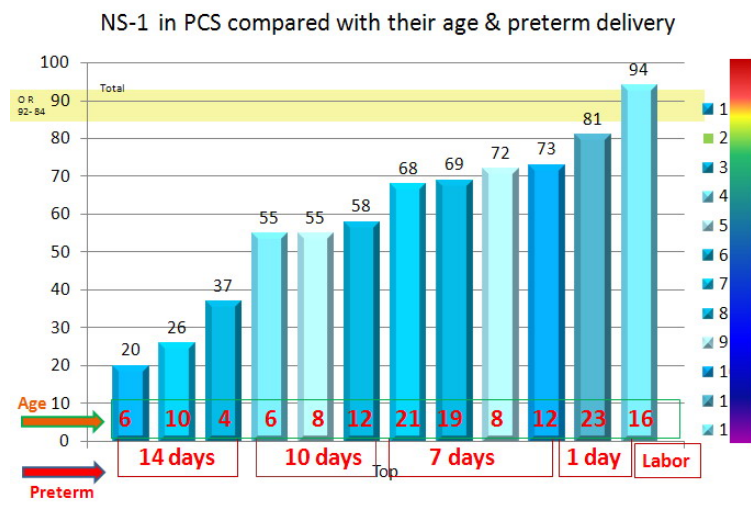


Fig. 9, NS-1 compared to PCS age and their delivery time

The correlation between NS-1 levels and the time of delivery was observed. Thus we may assume:

- The beginning of a labor event indicates that the bio-neural system of the fetus is ready for the delivery and mature for the independent survival.
- Therefore the absence of a labor event signifies that the bio-neural system of the fetus is not ready for the delivery and is immature for the independent survival outside of the maternal system.



Fig.10. Parallel concept of the life cycle of a chicken embryo. Preterm delivery is not a successful idea.

Preterm delivery event interrupts the natural cycle of fetus development and causes long term retardation of neural signaling within the bio neural system followed by being further adversely impacted when developing body/mind systems in PCS subjects.

Conserved NS-1 retardation may consistently immobilize the immune system and its response at a time of life challenges.

If bio neural system is immature for independent survival, then PCS subjects would be exposed to higher risks during their next cycles of independency in life:

- First cycle – birth: the infant begins its life outside of maternal system
- Second cycle occurs at 12 – 24 months: children start to walk, communicate with more people, eat various foods, i.e. acquire novel experiences and face new challenges.

New challenges:

- foreign microorganisms,
- unfamiliar or hostile emotional events
- mental environment
- sensorial pollution
- environmental pollution
- etc.

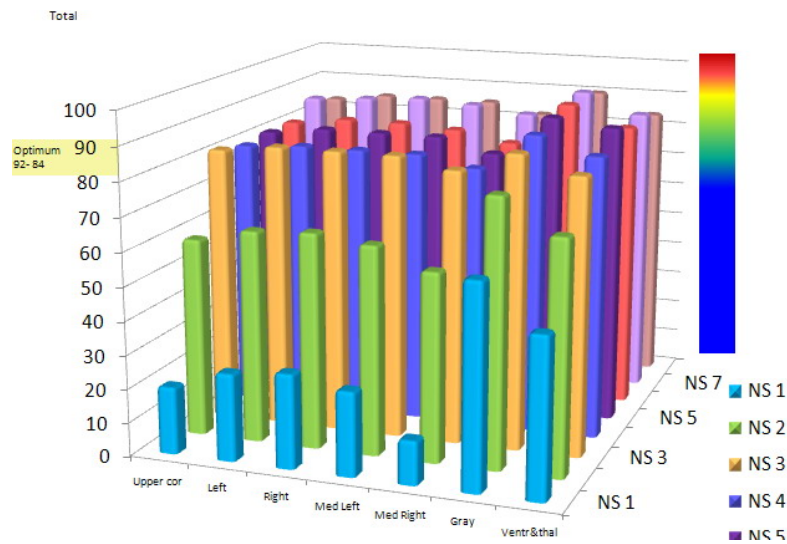


Fig.11. Collective neural signaling within total spectrum.

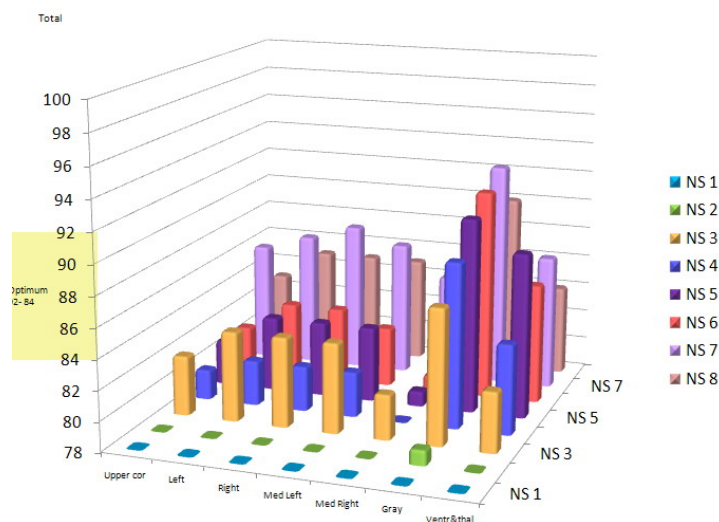


Fig.12. Collective neural signaling within 78% range

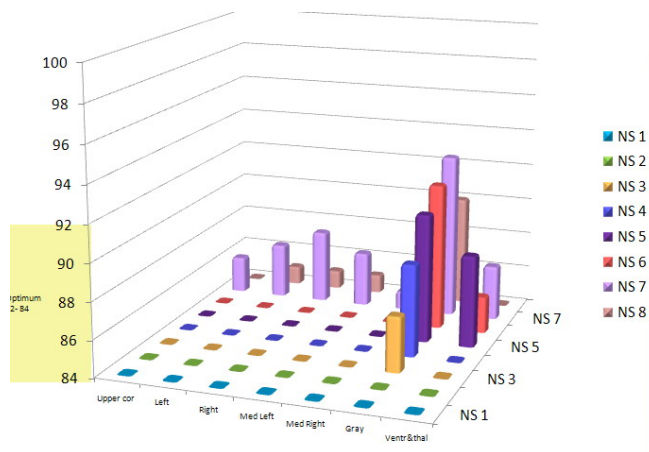


Fig.13. Limited neural functions at optimum range

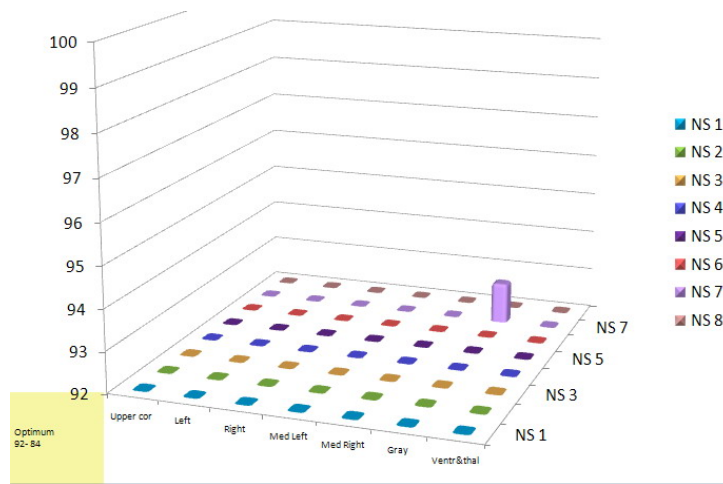


Fig.14. Neural signaling at hyperactive range

Fig. 11-14. Present collective signaling in a complicated PCS case. NS-I and NS-2 are retarded. Other neural signals follow their patterns and remain deficient at the optimum range.

Discussions

Part II Bio medical case study



The aim of this study was to find the answers to the following questions:

- to research PCS subjects for the presence of foreign agents, especially the ones responsible for invading the nervous tissue;
- to research if there is any correlation between NS-1 and the bio neural system developmental cycles in PCS subjects;
- to study the consequences of NS-1 functional imbalances in cerebral areas.

We will refer to the analysis of the three most complicated cases out of 12 subjects.

Criteria of choice: low NS-1 patterns with developed complications.

Case Study One

Male PCS subject, aged 5,5 (years) with the lowest NS-1 (20%) pattern (preterm delivery of 14 days) was infected around the age of 18 months by Epstein Barr Virus (EBV); the infection was complicated by mononucleosis. His motor skills began weakening after the age of 24 months.

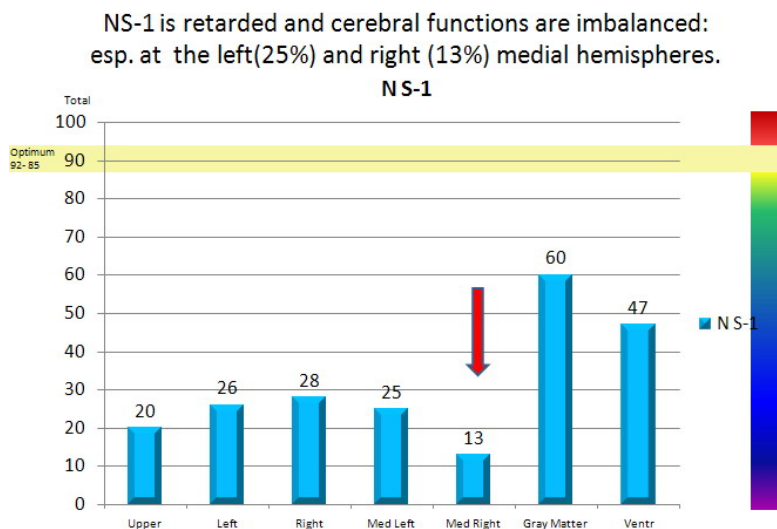


Fig. 15. NS-1 retarded and imbalanced functions of the left(25%) and right (13%) medial hemispheres

The damaged cerebral areas (Brodmann map)

Premotor Cortex (B 6) -

- sensory guidance of movement and control of proximal and trunk muscles of the body

Dorsolateral Prefrontal Cortex (B 8, 9) -

- motor planning, organization, and regulation
- executive functions

Limbic area (B 23) -

- cognitive and behavioral deficits

Cerebellum -

- motor control,
- non-motor cognition
- unsupervised learning

Fourth ventricle -

- Cerebrospinal fluids

By the age of 3 years PCS subject was diagnosed with metachromatic leukodystrophy.

- Progressive paralysis made him completely immobile by the age of 5
- MRI scans revealed destruction of white matter
- Degeneration of motor neurons
- Chronic infections in respiratory system
- Chronic infections in the Digestive and other systems, others

Conventional medicine cannot propose any cure for such conditions.

Case Study Two

- Next case (subject No 5) presents a female subject aged 8 years, who was born by PCS delivery (10 days before time).
- The subject was infected by EBV at the age of 15-16 months. Mother remarked bad smell from the subject's nasal area.
- Bio metrical data indicated that EBV was complicated by mononucleosis.

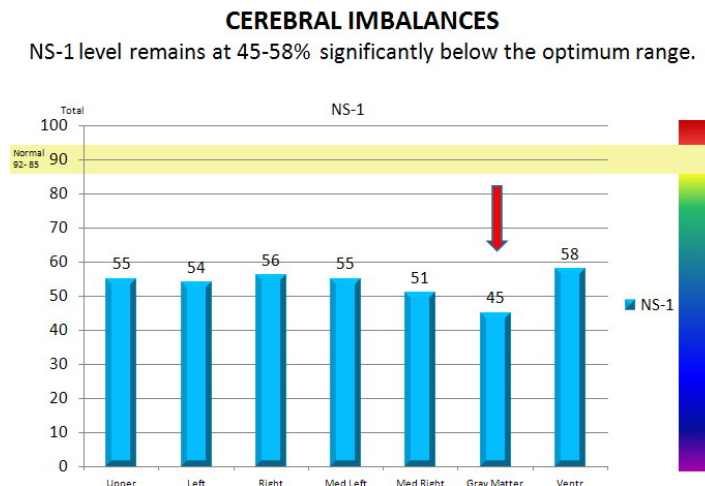


Fig. 16. NS-1 level remains at 45-58% significantly below the optimum range.

Cerebral imbalances at the molecular level NS-1 level remain at 45-58%, significantly below the optimum range.

Affected areas (Brodmann map)

Cingulate Cortex

B 23 and 31,

- emotion formation & processing; learning,
- memory,
- semantic processing
- music and language;

B 24 – cognitive & conscious experience

Dorsolateral Prefrontal Cortex:

B 9

- integration of sensory and mnemonic information,

- regulation of intellectual function, abstraction,
- internal concept generation,
- working memory and
- executive neural functions.

By the age of 3 the subject lost the ability to speak, gradually became autistic and developed the psychiatric disorder of depersonalization by the age of 5.

Case Three

- The third case (subject № 8) presents a male subject aged 19, who was infected with EBV before the age of 24 months.
- EBV infection was complicated by mononucleosis and developed into a slow chronic processes

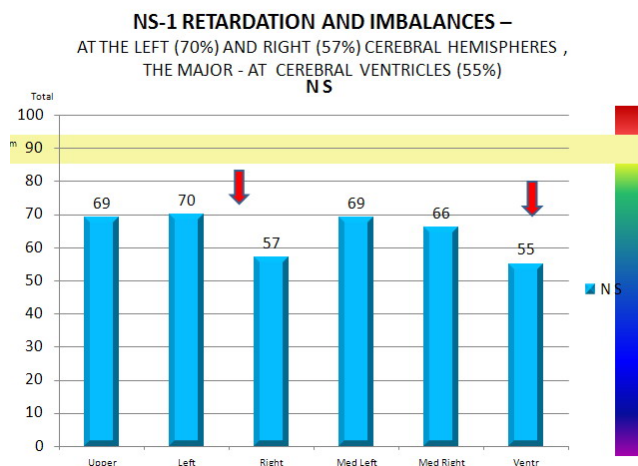


Fig.17. NS-1 retardation and imbalances – at the left (70%) and right (57%) cerebral hemispheres , the major - at cerebral ventricles (55%) that form cerebral fluids.

Affected areas

Dorsolateral Prefrontal Cortex:

B 9

- integration of sensory and mnemonic information,
- regulation of intellectual function, abstraction,
- internal concept generation,
- working memory and
- executive neural functions.

B 10

Posterior Parietal lobe

- B5 primary somatosensory,
- B 7 visual motor coordination

Temporal

- B 41, 42 the primary auditory cortex

Occipital

- B 17 primary visual cortex
Limbic and thalamic areas

By the age of 18 years the subject developed brain cancer (pituitary and pineal gland).

The other 8 subjects were also infected with EBV before the age of 24 months. EBV infection was complicated by a number of co-infections and developed into various imbalances and disorders:

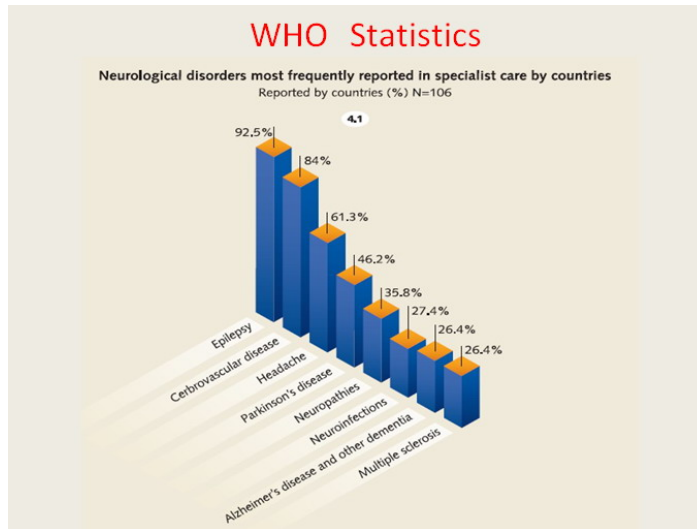
1. Learning disorder, dyslexic, hormone imbalances, depression
2. Digestive system disorders, tendency to ulcer, attention deficit disorder
3. Constitutional growth delay, compromised immune status
4. Kron's disease, Ulcerative colitis (large intestine was resected), obsessive compulsive disorder
5. Moderate immune disorders, emotional challenges
6. Benign brain tumor at a left temporal lobe with mild motor imbalances.
7. Mild pituitary gland disorders, emotional challenges.
8. Digestive system disorders (peptic ulcer), early predisposition to cancer of stomach and liver.

Conclusion:

Our experimental findings established scientific evidence in the relationship between premature delivery by Cesarean section (PCS) and immune system imbalances, as well as mental and psychiatric disorders due to the following:

- NS-1 is associated with real time neuro cellular communication that orchestrates the dynamic equilibrium and governs the adaptive capacity of the body/mind system: metabolism and homeostasis.
- The beginning of a labor event indicates that the bio-neural system of the fetus is ready for delivery and mature for the independent survival. Therefore the absence of a labor event signifies that the bio-neural system of the fetus is not ready for delivery and is immature for the independent survival outside of the maternal system.
- Preterm delivery event interrupts the natural cycle of fetus development and causes long term retardation of neural signaling in the bio neural system followed by auxiliary adverse impacts in the developments of body/mind systems in PCS subjects.

- These findings may shed light on the origin of human health imbalances, immune and neural disorders.



- At present, inspite of WHO recommendations, about CS rate (15%), CS rates reach up to 30% in many countries in Europe and Australia, over 40 % in Brazil, Latin America, India, 45-50% in USA, over 50% in China, etc.
- CS doubles in cases of multiple births.
- Would it mean that in 20-30 years more than half of the population in those countries should be sick both physically and mentally and another half of their population should work very hard to support them as well as their own families?!

Present research may sound as an early warning for those, who care about the future of their children and quality of life.

Acknowledgements.

We would like to express our sincerest gratitude to Dr. John Yangpinit, M.D., OB. GYN and Dr. Narong Nimsakul, M.D., F.I.C.S. for their valuable advises over the critical issues in our research works.

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