Chapter 6

The Meditative Brain - Archaeal Modulated Mirror Quantal Perceptive Neurons Mediate Consciousness and Functions as Quantal Observer

Introduction

Meditation can modulate body metabolonomics and brain function. The mechanism is by induction of the heme oxygenase system. Meditation induced heme oxygenase which converts heme to carbon monoxide and bilirubin. Bilirubin and biliverdin are free radical scavengers and mops up free radicals. Free radicals are required for the function of the NMDA dependent thalamo-cortico-thalamic feedback reverberatory circuit crucial in consciousness. This circuit mediates working memory and focused attention. Free radicals also activate NMDA and by its capacity of diffusing freely through the brain systems can induce NMDA activity, synchronized burst firing of neurons in different parts of sensory areas producing perceptual synchronization. This mediates consciousness. Thus the scavenging of free radicals by heme oxygenase leads to suppression of consciousness and meditative trances. Heme oxygenase induction suppresses ALA synthase. Thus heme is depleted from the system. There is increased porphyrin synthesis leading onto porphyrinuria and porphyria. The stimulus for porphyrin synthesis comes from heme deficiency. Porphyrins can organize into self replicating supramolecular structures called porphyrions which are induced by meditative practices. The porphyrins can self organize to form macromolecular structures which can self replicate to form a porphyrin organism. The photon induced transfer of electrons along the macromolecule can lead to light induced ATP synthesis. The porphyrins can form a template on which RNA and DNA can form generating viroids. The porphyrins can also form a template on which prions can form. They all can join together - RNA viroids, DNA viroids, prions - to form primitive archaea. Thus the archaea are capable of self replication on porphyrin templates. The self replicating archaea can sense gravity which gives rise to consciousness. They can also sense the anti-gravity fields which

gives rise to the unconscious brain. Thus there can be both self replicating archaea and anti-archaea regulating the conscious and unconscious brain. Thus the climate change stress mediated increased porphyrin synthesis leads to prefrontal cortex atrophy, cerebellar dominance, cerebellar cognitive affective disorder, quantal perception and Neanderthalisation of the population. The porphyrions are self replicating supramolecular organisms which forms the precursor template on which the viroids, prions and nanoarchaea originate. Meditative stress induced template directed abiogenesis of porphyrions, prions, viroids and archaea is a continuous process and can contribute to changes in brain structure and behavior as well as disease process.

The human endosymbiotic actinidic archaea catabolizes cholesterol and uses it for its energy metabolism. The ring oxidation of cholesterol generates pyruvate which enters the GABA shunt pathway resulting in the formation of succinyl CoA and glycine used for porphyrin synthesis. The side chain oxidation of cholesterol results in steroid synthesis and the generation of the steroidal glycoside digoxin which serves as an endogenous regulator of the sodium potassium pump inhibiting it. The archaea are magnetotactic and contain the dipolar porphyrins and magnetite. Digoxin by inhibiting the sodium potassium ATPase generates a pumped phonon system involving dipolar porphyrins and magnetite. This generates a Frohlich model of Bose-Einstein condensate at normal temperature resulting in quantal perception. The quantal perception can result in perceiving low level of EMF from the environment. This can generate conscious perception. The generation of porphyrins and digoxin in actinidic archaeal neurons was tested in disorders of consciousness schizophrenia and autism.[1-17]

Materials and Methods

Freshly diagnosed schizophrenia and autism based on DSM IV criteria were chosen from the study. Serum cytochrome 450, digoxin synthesis and porphyrin synthesis were studied. There were 10 patients in each group and each patient had an age and sex matched healthy control selected randomly from the general population. The blood samples were drawn in the fasting state before treatment was initiated. Plasma from fasting heparinised blood was used and the experimental protocol was as follows (I) Plasma+phosphate buffered saline, (II) same as I+cholesterol substrate, (III) same as II+cerium 0.1 mg/ml, (IV) same as II+ciprofloxacine and doxycycline each in a concentration of 1 mg/ml. Cholesterol substrate was prepared as described by Richmond. Aliquots were withdrawn at zero time immediately after mixing and after incubation at 37 ℃ for 1 hour. The following estimations were carried out: - Cytochrome F420, digoxin and ALA. Cytochrome F420 was estimated flourimetrically (excitation wavelength 420 nm and emission wavelength 520 nm).

Results

Plasma of control subjects showed increased levels of the above mentioned parameters with after incubation for 1 hour and addition of cholesterol substrate resulted in still further significant increase in these parameters. The plasma of patients showed similar results but the extent of increase was more. The addition of antibiotics to the control plasma caused a decrease in all the parameters while addition of cerium increased their levels. The addition of antibiotics to the patient's plasma caused a decrease in all the parameters while addition of cerium increased their levels but the extent of change was more in patient's sera as compared to controls. The results are expressed in tables 1-3 as

percentage change in the parameters after 1 hour incubation as compared to the values at zero time.

Table 1. *Effect of cerium and antibiotics on cytochrome F420.*

Group	CYT F420 % (Increase with Cerium)		CYT F420 % (Decrease with Doxy+Cipro)	
	Mean	± SD	Mean	± SD
Normal	4.48	0.15	18.24	0.66
Schizo	23.24	2.01	58.72	7.08
Autism	21.68	1.90	57.93	9.64
Meditation	22.42	1.83	56.55	8.92
F value	306.749		130.054	
P value	< 0.001		< 0.001	

Table 2. *Effect of cerium and antibiotics on digoxin.*

Group	Digoxin (ng/ml) (Increase with Cerium)		Digoxin (ng/ml) (Decrease with Doxy+Cipro)	
	Mean	± SD	Mean	± SD
Normal	0.11	0.00	0.054	0.003
Schizo	0.55	0.06	0.219	0.043
Autism	0.53	0.08	0.205	0.041
Meditation	0.59	0.07	0.201	0.042
F value	F value 135.116		71.706	
P value	P value < 0.001		< 0.001	

Table 3. *Effect of cerium and antibiotics on delta amino levulinic acid.*

Group	ALA % (Increase with Cerium)		ALA % (Decrease with Doxy+Cipro)	
	Mean	± SD	Mean	± SD
Normal	4.40	0.10	18.48	0.39
Schizo	22.52	1.90	66.39	4.20
Autism	23.20	1.57	66.65	4.26
Meditation	24.52	1.46	68.25	4.35
F value	372.716		556.411	
P value	< 0.001		< 0.001	

Discussion

The study shows that the human endosymbiotic actinidic archaea catabolizes cholesterol and uses it for its energy metabolism. The ring oxidation of cholesterol generates pyruvate which enters the GABA shunt pathway resulting in the formation of succinyl CoA and glycine used for porphyrin synthesis. The side chain oxidation of cholesterol results in steroid synthesis and the generation of the steroidal glycoside digoxin which serves as an endogenous regulator of the sodium potassium pump inhibiting it. The archaea are magnetotactic and contain the dipolar porphyrins and magnetite. Digoxin by inhibiting the sodium potassium ATPase generates a pumped phonon system involving dipolar porphyrins and magnetite. This generates Frohlich model of Bose-Einstein condensate at normal temperature resulting in quantal perception. The quantal perception can result in perceiving low level of EMF from the environment. This can generate conscious perception. The generation of porphyrins and digoxin in actinidic archaeal neurons was tested in disorders of consciousness schizophrenia and autism.

Consciousness involves quantal perception. The wave nature of the quantal state becomes particulate when it is observed by an observer. Consciousness involves the sum total of quantal perception by the brain resulting in the observer state. The observer and observed have an inter-related existence. Thus the observer and observed comes into existence due to the quantal perceptive state of the actinidic archaeal mirror neurons. The quantal state is mediated by archaeal digoxin and the dipolar magnetite and porphyrins. Consciousness involves working memory, perceptual synchronization and focused attention. Focused attention depends on magnetotactic or quantal low level of EMF perception from the world and its objects. The perceptual synchronization depends on the phenomena of cross activation of neuronal systems due to quantal phenomena.

This can also generate the phenomena of synaesthesia and synkinesia. Working memory depends upon quantal perceptive mechanisms mediated by magnetotactic actinidic archaeal neurons in the brain generating reverberatory circuits. Thus actinidic archaeal induced mirror neurons in the prefrontal cortex and cerebellum are quantal perceptive neurons. The cerebellum is more concerned with intuition and extrasensory perception. The cerebellar neurons may be predominantly actinidic archaeal induced quantal perceptive mirror neurons. Quantal perceptive actinidic archaeal induced magnetotactic mirror neurons may be more dense in the cerebellum than prefrontal cortex and the cerebellar cortical circuits may play a major role in consciousness. Quantal perceptive mirror neurons fire in response to low level of EMF from the observed world. This quantal perceptive mirror neuron function in the cerebellum and to a lesser extent in the prefrontal cortex generates the observer as such and the observed world also by the act of observation. The world as such exists on the basis of magnetotactic archaeal mediated quantal mirror neuron function generating the observed-observer relation. Thus consciousness is a function of actinidic archaeal induced quantal perceptive mirror neurons in the cerebellum and to some extent in the prefrontal cortex.

Schizophrenia and autism are both disorders of consciousness. The actinidic archaeal induced quantal perceptive mirror neuron function is hyperactive in both disorders. This results in dysfunction of consciousness due to increase in actinidic archaeal density, digoxin synthesis and porphyrin synthesis. Perception occurs predominantly by quantal perceptive mechanism in schizophrenia and autism. This also leads to increased creativity and intuition in schizophrenia and autism. Thus the observer and observed depends on actinidic archaeal induced quantal perceptive mirror neuron function. The world as such is an illusion created by the inter-relationship between the observed and observer mediated by quantal perceptive mirror neurons. The quantal perceptive image of the world and the

observer can exist as multiple possibilities in multiple universes leading to the phenomena of eternal existence in multiverse universes.

The archaeal porphyrins can modulate amyloid formation and modulate systemic disease process. The archaeal cholesterol oxidase activity was increased resulting in generation of pyruvate and hydrogen peroxide. The pyruvate gets converted to glutamate and ammonia by the GABA shunt pathway. The pyruvate is converted to glutamate by serum glutamate pyruvate transaminase. The glutamate gets acted upon by glutamate dehydrogenase to generate alpha ketoglutarate and ammonia. Alanine is most commonly produced by the reductive amination of pyruvate via alanine transaminase. This reversible reaction involves the interconversion of alanine and pyruvate, coupled to the interconversion of alpha-ketoglutarate (2-oxoglutarate) and glutamate. Alanine can contribute to glycine. Glutamate is acted upon by Glutamic acid decarboxylase to generate GABA. GABA is converted to succinic semialdehyde by GABA transaminase. Succinic semialdehyde is converted to succinic acid by succinic semialdehyde dehydrogenase. Glycine combines with succinyl CoA to generate delta aminolevulinic acid catalyzed by the enzyme ALA synthase. There was upregulated archaeal porphyrin synthesis in the patient population which was archaeal in origin as indicated by actinide catalysis of the reactions. The cholesterol oxidase pathway generated pyruvate which entered the GABA shunt pathway. This resulted in synthesis of succinate and glycine which are substrates for ALA synthase. The archaea can undergo magnetite and calcium carbonate mineralization and can exist as calcified nanoforms. The possibility of Warburg phenotype induced by actinide based primitive organism like archaea with a mevalonate pathway and cholesterol catabolism was considered in this paper. The Warburg phenotype results in inhibition of pyruvate dehydrogenase and the TCA cycle. The pyruvate enters the GABA shunt pathway where it is converted to succinyl CoA. The glycolytic pathway is

upregulated and the glycolytic metabolite phosphoglycerate is converted to serine and glycine. Glycine and succinyl CoA are the substrates for ALA synthesis. The archaea and viroids can regulate the nervous system including the NMDA/GABA thalamo-cortico-thalamic pathway mediating conscious perception. Porphyrin photo-oxidation can generate free radicals which can modulate NMDA transmission. Free radicals can increase NMDA transmission. Free radicals can induce GAD and increase GABA synthesis. ALA blocks GABA transmission and upregulates NMDA. Protoporphyrins bind to GABA receptor and promote GABA transmission. Thus porphyrins can modulate the thalamo-cortico-thalamic pathway of conscious perception. The dipolar porphyrins, PAH and archaeal magnetite in the setting of digoxin induced sodium potassium ATPase inhibition can produce a pumped phonon system mediated Frohlich model superconducting state inducing quantal perception with nanoarchaeal sensed gravity producing the orchestrated reduction of the quantal possibilities to the macroscopic world. ALA can produce sodium potassium ATPase inhibition resulting in a pumped phonon system mediated quantal state involving dipolar porphyrins. Porphyrin molecules have a wave particle existence and can bridge the dividing line between quantal state and particulate state. Thus the porphyrins can mediate conscious and quantal perception. Porphyrins binding to proteins, nucleic acids and cell membranes can produce biophoton emission. Porphyrins by auto-oxidation can generate biophotons and are involved in quantal perception. Biophotons can mediate quantal perception. Cellular porphyrins photo-oxidation are involved in sensing of earth magnetic fields and low level biomagnetic fields. Thus porphyrins can mediate extrasensory perception. The porphyrins can modulate hemispheric dominance. There is increased porphyrin synthesis and right hemispherical chemical dominance and decreased porphyrin synthesis in left hemispherical chemical dominance. The increase in archaeal porphyrins can contribute to the

pathogenesis of schizophrenia and autism. Porphyria can lead to psychiatric disorders and seizures. Altered porphyrin metabolism has been described in autism. Porphyrin by modulating conscious and quantal perception is involved in the pathogenesis of schizophrenia and autism. It also plays a role in the genesis of consciousness.

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