Chapter 3

Archaeaon and Vitamin C Synthesis -

The Vitaminocyte Organelle

Introduction

Ascorbic acid is not synthesized by primates and humans. Vitamin C is synthesized from monosaccharides especially mannose, galactose or glucose. Primates and humans have the mutated form of the enzyme L-gulonolactone oxidase and are therefore not able to synthesize vitamin C. Archaea are endosymbionts in the human cell and function as cellular organelle. Archaea have the vitamin C synthetic pathway. Therefore the human cell could be able to synthesize vitamin C using endosymbiotic archaea functioning as organelle.

Fructolysis in the archaeaon vitaminocyte can contribute to vitamin C and vitamin E synthesis. The Neanderthals have a higher density of archaeal symbiosis resulting in increasing number of vitaminocyte organelle. This results in increased synthesis endogenous ascorbic acid and tocopherol in Neanderthals which function as free radical scavengers. Free radicals are important in neuronal function and NMDA activity. Free radicals increase NMDA activity. Free radicals are also important as messengers of human endogenous retroviruses. Free radicals mediate the expression and reintegration into the genome where it functions as jumping genes contributing to genomic plasticity and dynamicity. Genomic dynamicity is consequently absent in Neanderthals due to higher synthesis of ascorbic acid and tocopherol by the vitaminocyte and free radical deficiency. Genomic dynamicity and HERV sequences contribute to development of synaptic connectivity, formation of cerebral cortex and brain size. This leads onto defective NMDA transmission, cerebral cortical dysfunction and cerebellar dominance in Neanderthals. The brain size in Neanderthals is bigger than the newer species of homo sapiens. The homo sapiens on the other hand has less of archaeal symbiotic density and fewer archaeal vitaminocyte organelle. The gene for vitamin C synthesis is already mutated in all human species and in the presence of decreased density of

archaeal vitaminocyte organelle in homo sapiens there is deficiency of ascorbic acid and tocopherols in homo sapiens. This results in reduced free radical scavenging, increased free radicals in the system, increased expression and reintegration of HERV sequences in to the genome. There is increased genomic dynamicity and plasticity and a dominant cerebral cortical function in homo sapien population and a smaller brain size. Thus the archaeal symbiosis and the resultant vitaminocyte organelle decides the human species type, brain size, cerebral cortical versus cerebellar dominance and the human consciousness.

Materials and Methods

10 normal individuals were drawn for the study. 10 ml of plasma from heparinised blood was taken for the study. The experimental protocols was as follows: (1) Plasma+buffered saline containing glucose 1 mg/ml with vitamin C concentration measured at 0 time and 2 hour time. (2) Plasma+doxy 1 mg/ml+buffered saline containing glucose 1 mg/ml with vitamin C concentration measured at 0 time and 2 hour time. Cytochrome F420 activity was also assessed.

Results

The vitamin C level were found to increase spontaneously from 9 mg/l at 0 time to 14 mg/l at 2 hr. in experimental protocol (1) containing plasma+buffered saline with glucose at 1 mg/ml. The solution also showed cytochrome F420 activity. The protocol (2) containing plasma+doxy+buffered saline containing glucose at 1 mg/ml had no vitamin C activity detected or cytochrome F420 activity detected. The archaeal endosymbiont or archaeaon could thus synthesize vitamin C.

Discussion

The study demonstrates that vitamin C is synthesized by endosymbiotic archaeaon. It functions as a vitaminocyte. The primates and humans lost the capacity to synthesize vitamin C. L-gulonolactone oxidase is deficient in humans. Vitamin C deficiency is a genetic disease. Vitamin C deficiency played an important role in human evolution. Vitamin C is an anti-oxidant. Its deficiency leads to free radical generation and modulation of monoaminergic and glutamatenergic neurotransmission and evolution of the cerebral cortex. The generation of free radicals may have played the role in conscious perception and the bigger size of the primate cerebral cortex as seen in homo sapiens. The capacity to generate vitamin C synthesis by endosymbiotic archaea may shrink the cerebral cortex and increase the cerebellar size leading onto the dominance of the unconscious brain as seen in homo neanderthalis. Vitamin C deficiency is implicated in disorders of consciousness like schizophrenia and autism.

Vitamin C deficiency leads to defective collagen synthesis and breaks in the vessel wall producing damage which is healed by adhesion of lipoprotein a to the vessel wall producing atherosclerosis. Atherosclerosis is a genetic vitamin C deficiency disease. This hypothesis was put forward by Linus Pauling. The capacity of endosymbiotic archaea to synthesize vitamin C may protect against it. Vitamin C is required for insulin secretion and its deficiency leads to diabetes mellitus and metabolic syndrome. Vitamin C deficiency leads to oncogenesis.

Vitamin C deficiency generates free radicals which can activate oncogenes producing cell proliferation. The defective collagen matrix that is formed can lead to metastasis. Oncogenesis can be considered as a vitamin C deficiency syndrome. Vitamin C is seen in high levels in lymphocytes. Vitamin C deficiency leads to immunosuppression and viral infections. Vitamin C is anti-viral agent. Vitamin C is required for lymphocyte function and its

deficiency leads to autoimmune disease. Vitamin C deficiency leads to free radical generation and cell death and neurodegeneration.

All the civilisational disorders of schizophrenia, autism, autoimmune disease, neurodegeneration, metabolic syndrome X, cancer and atherosclerosis. The archaeaon is the cellular organelle concerned with ascorbic acid synthesis and cyto protection. It can be considered as a vitaminocyte.[1-3]

Reference

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