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RNA Viroids and the Origin of Retroviral Resistance and Emerging Viral Pandemics – The Crossing of Species Barrier and New Viruses

Introduction

Studies from our laboratory have shown that global warming and the low level EMF pollution results in increased endosymbiotic archaeal growth. The archaea can produce methanogenesis from hydrogen and carbon dioxide as well as from acetate. The human body methanogenesis can result in more global warming. Methane has got a short term action but its global warming potential is 29 times that of carbon dioxide. Thus the human endosymbiotic archaeal overgrowth is the principal cause of global warming. Global warming is initially triggered by carbon dioxide and EMF pollution produced by homo sapien industrialization. It is carried forward by human endosymbiotic archaeal overgrowth and methanogenesis. The archaea can induce stem cell conversion and neanderthalisation of the human species. The archaea catabolises cholesterol generating digoxin which can modulate RNA editing and magnesium deficiency resulting in reverse transcriptase inhibition. The archaeal cholesterol catabolism can deplete the membrane rafts of the CD4 cell of cholesterol impeding the entry of the retrovirus into the cell. The archaea can produce permanent immune activation producing resistance to viral and bacterial infection. The archaeal cholesterol catabolism depletes tissue cholesterol producing vitamin D deficiency and immune activation. Thus archaeal overgrowth results in retroviral resistance and generation of the Neanderthal phenotype. The endosymbiotic archaea can secrete virus like RNA and DNA particles. The endosymbiotic archaea can induce uncoupling proteins inhibiting mitochondrial oxidative phosphorylation and generating ROS. The endosymbiotic archaeal magnetite can generate low level of EMF. The low level of EMF and ROS are genotoxic and produce breakages in hotspots of chromosome. It can also trigger rearrangements in hotspots of chromosome inhabited by retroviral and non-retroviral elements producing their expression.

The archaeal secreted DNA and RNA viroids can recombine with the expressed retroviral, non-retroviral elements and other genomic segments of the human chromosome generating new RNA and DNA viruses. Thus the neanderthalised humans can serve as an origin for new RNA and DNA viruses as well as mutated retroviruses. The endosymbiotic archaea converts the Neanderthal cells to stem cells. The stem cells are resistant to immune attack. The stem cells can serve as a reservoir for this new RNA and DNA viruses. The stem cells and archaeal cells can also serve as a reservoir for viruses and bacteria belonging to other plants and animals. This helps to generate the species barrier jump in noted in recent emerging viral and bacterial infections. Thus the endosymbiotic archaeal growth produces neanderthalised version of homo sapiens which are retroviral resistant and resistant to other viral and bacterial infection consequent to immune activation and digoxin induced RNA editing. The endosymbiotic archaeal overgrowth mediated neanderthalised version of homo sapiens generates new mutated RNA and DNA viruses as well as retroviruses at the same time being resistant to them as in the case of the species bat. The homo sapiens do not have the Neanderthal mechanisms of immune activation as their archaeal load is meagre. They serve as fodder for infection from Neanderthal generated viruses and bacteria and suffer eventual extinction. This paper studied the archaeal status in patients with recurrent viral infections and retroviral infections. The generation of RNA and DNA viroids from archaea was also studied[1-17].

Materials and Methods

Blood samples were drawn from normal population, Neanderthal phenotype, retroviral infection and recurrent viral infection. 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, free RNA and free DNA. Cytochrome F420 was estimated flourimetrically (excitation wavelength 420 nm and emission wavelength 520 nm).

Results

Plasma of Neanderthal phenotype 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 retroviral patients and those with recurrent viral infections showed similar results but the extent of increase was insignificant. 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 Neanderthal phenotype sera as compared to patients with retroviral infection and recurrent viral infection. The results are expressed in tables 1-2 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
Retroviral & frequent viral infection	4.48	0.15	18.24	0.66
Neanderthal phenotype	23.46	1.87	59.27	8.86
F value	306.749		130.054	
P value	< 0.001		< 0.001	

Table 2 *Effect of cerium and antibiotics on free RNA and DNA.*

Group	DNA % change (Increase with Cerium)		DNA % change (Decrease with Doxy+Cipro)		RNA % change (Increase with Cerium)		RNA % change (Decrease with Doxy+Cipro)	
	Mean	± SD	Mean	± SD	Mean	± SD	Mean	± SD
Retroviral & frequent viral infection	4.37	0.15	18.39	0.38	4.37	0.13	18.38	0.48
Neanderthal phenotype	23.40	1.51	63.68	4.66	23.08	1.87	65.09	3.48
F value	337.577		356.621		427.828		654.453	
P value	< 0.001		< 0.001		< 0.001		< 0.001	

Discussion

The archaeal symbiosis results in cholesterol catabolism and synthesis of digoxin. Digoxin has an APOBEC-like action producing RNA editing. This mutates the HIV virus inhibiting its replication. Digoxin is a membrane sodium potassium ATPase inhibitor. It produces magnesium deficiency intracellularly. Magnesium can inhibit reverse transcriptase activity inhibiting HIV replication. Endosymbiotic archaea can induce porphyrin synthesis. Porphyrin can combine with HIV virus inactivating it. The endosymbiotic archaea produces cholesterol catabolism and uses cholesterol as an energy source. This results in modulation of membrane rafts of the CD4 receptor resulting in retroviral resistance. The archaeal cholesterol catabolism produces cholesterol depletion and vitamin D deficiency. This produces immune activation. The endosymbiotic archaeal

growth as such produces permanent immune activation resulting in resistance to viral infections. This has been demonstrated in bacteria like *mycobacterium leprae*. The immune genes are always turned on inhibiting retroviral and other viral replication. The endosymbiotic archaeal growth results in turning in of uncoupling proteins transferring human somatic cells to the Warburg phenotype and stem cell type. Stem cells have the energetics obtained from glycolysis and not from mitochondrial oxidative phosphorylation. Stem cells are resistant to retroviral infection and other viral infection. Thus endosymbiotic archaeal growth can inhibit HIV replication and produce HIV resistance[1-17].

Endosymbiotic archaeal growth produces neanderthalisation of the human species. The homo neanderthalis can serve as a reservoir for viral infections at the same time being resistant to it. The homo neanderthalis has the stem cell phenotype which can serve as a reservoir for bacterial and viral infection. This has been demonstrated in the case of mycobacterium tuberculosis which induces stem cell transformation and survives within the stem cell resisting immune onslaught. This protective mechanism is not available for the homo sapien species and they tend to succumb to viral infections arising from the homo neanderthalis reservoir[1-17].

The homo neanderthalis has archaeal induced induction of uncoupling proteins producing mitochondrial oxidative phosphorylation inhibition and dominant glycolytic energetics. This results in conversion to a stem cell phenotype. The high metabolic rate results in a fever response which turns on the immune system resulting in permanent immune activation. The high temperatures also damage the cell producing a system of high efficiency DNA repair. This results in permanent resistance to viral infections consequent to continuous immune activation and high efficiency DNA repair. The increased archaeal growth in homo neanderthalis produces uncoupling proteins and stem cell conversion making it also resistant to

viral infections. This produces a system of viral reservoir in homo neanderthalis like bats which serves as a reservoir for rabies virus, Ebola virus and SARS virus. The bats also have archaeal endosymbionts. Archaeal endosymbionts have been demonstrated in the bat guano pile[1-17].

The archaeal magnetite produces increased level of low level EMF in the homo neanderthalis producing genomic instability. The human genome contains viral sequences like the ebola virus, retro virus and the borna virus. Owing to the archaeal magnetite induced low level EMF mediated genomic instability the viral elements in the human genome gets expressed. The archaeal magnetite induced low level EMF as well as archaea itself produces permanent continuous immune activation results in protection against viral infections. Thus in the homo neanderthalis the viral elements in the genome functioning as genomic parasites gets expressed and the homo neanderthalis serves as a reservoir for viruses akin to bats which are also part of the primate kingdom. The archaea in the homo neanderthalis secretes DNA and RNA viroids which can self replicate on porphyrin templates. Virus-like particles and extracellular DNA are produced by the hyperthermophilic archaea- thermococcales. The RNA viroids can get converted to DNA by HERV reverse transcriptase and get integrated into the neanderthalic genome by integrase. The DNA viroids secreted by the archaea can also gets integrated into the human genome by integrase. Thus the archaeal RNA and DNA viroids which are of great diversity get integrated into the human genome by the action of integrase and HERV reverse transcriptase[1-17].

The genomic instability of the neanderthalic genome consequent to low level EMF generated by archaeal magnetite as well as archaeal porphyrins intercalating with human DNA can result in expression of viral elements of the human genome. RNA polyribonucleotides from chromosome 22q11.2 ALU sequences have been demonstrated in the sera of patients with Gulf war syndrome and

multiple myloma. The exposure to genotoxic substances and low level EMF results in activation of retrotransposon ALU elements leading to the unique RNA segments in the serum. The RNA polyribonucleotides have the proteolipid cover which resists digestion by enzymes. The SARS virus spike protein is expressed consequent to complex genetic rearrangement of segmental hotspots of chromosome 7 due to catastrophic environmental EMF exposure. Humans and animals exposed the nuclear or chemical weapons or continuous low level EMF radiation produces new regulatory gene expression which are then transcribed as non-viral RNA microvissicules covered by proteolipid membranes. Low level of EMF and genotoxic agents leads to gene rearrangement of ALU sequences with generation of RNA polyribonucleotides covered by proteiolipid vesicles. The SARS virus is supposed to be due to complex reshuffling of hotspots of chromosome 7[1-17].

The archaea produces uncoupling of the mitochondrial oxidative phosphorylation of the somatic cells. The archaeal magnetite produces expression of low level of EMF. The reactive oxygen species produced by uncoupling of mitochondrial oxidative phosphorylation and low EMF produced by archaeal magnetite are genotoxic and produces complex rearrangement of the Neanderthal genome, breakage of hotspots in the chromosome which are extremely fragile producing expression of RNA polyribonucleotides which can get converted to DNA polyribonucleotides by the enzyme HERV reverse transcriptase. The RNA and DNA polyribonucleotides packaged in proteolipid vesicles can mimic RNA and DNA viruses. The junk DNA of humans are constituted by HERV sequences and non-retroviral RNA viruses like Ebola and borna viruses. They are genomic parasites. The neanderthalic cell has increased production of ROS consequent to archaeal induced uncoupling. The archaeal magnetite induced EMF as well as archaea induced uncoupling generated ROS are genotoxic. The exposure to ROS and low level EMF can produce rearrangement of junk DNA producing new type

of RNA viruses which can get expressed. The viral- retroviral and non-retroviral elements of the human genome as well as human genomic sequences per se which are expressed can recombine with the archaeal DNA and RNA viroids producing new mutated dangerous viruses both of the RNA and DNA type in the homo neanderthalis. The homo neanderthalis have uncoupled oxidative phosphorylation and more of ROS production. The ROS serves as messengers modulating viral replication. Thus there is genomic instability inducing expression of the viral elements in the neanderthalic genome, archaeal expression of DNA and RNA viroids, recombination of DNA and RNA archaeal viroids with neanderthalic genomic viral elements which are expressed and ROS induced multiplication of newly mutated virus[1-17].

The homo neanderthalis themselves are resistant to these viruses and serve as a reservoir for them like their primate brother the bat. The homo sapiens have less endosymbiotic archaeal symbiosis and have no uncoupling protein induction resulting in maintenance of their mature somatic cells as such. The homo sapien cell has dominant mitochondrial oxidative phosphorylation metabolism generating less of ROS. The homo sapiens are immunosuppressed. The homo sapiens are not permanently immune activated producing viral resistance. They don't have the stem cell phenotype. They don't have dominant archaeal mediated cholesterol catabolism modulating viral receptors. The homo sapiens don't have digoxin synthesis inhibiting RNA editing and viral replication. The homo sapiens are sitting ducks for viral infections generated by homo neanderthalis which infects them and kills them. The homo neanderthalis which generated the viruses in the first place are resistant to the viral infections. The homo sapien species gets exterminated from the viral infection generated from homo neanderthalis. The homo neanderthalis species uses viral infection as a mechanism to eliminate the homo sapiens and produce species dominance[1-17].

The homo neanderthalis has archaea as endosymbionts. The archaea behaves like stem cells and can induce conversion of somatic cells to stem cells. The stem cells and archaeal cells can serve as reservoirs of other species virus and bacteria like plant and animal viruses and bacteria. The plant and animal viruses and bacteria can thrive in the somatic stem cells and archaeal cells as they escape immune detection. The Neanderthals tissue system can be compared to an archaeal/stem cell colony or network which serves as a reservoir for other animal and plant species bacteria and viruses as well as a generating centre for new RNA and DNA viruses. The RNA and DNA viruses are created by recombination between expressed genetically rearranged bits of the human chromosome and virus like DNA and RNA particles secreted by the archaea. This paves way for the generation of unlimited number of new RNA and DNA viruses as well as produce conditions for viruses and bacteria to cross the species barrier. This is evidenced by the SARS virus, the nipah virus and hendra virus crossing species. The algal virus has been reported to infect human brains producing cognitive dysfunction. The generation of new RNA and DNA viruses and the creation of a stem cell/archaeal reservoir for other species bacteria and viruses, the Neanderthal resistance to infections by viruses and bacteria and the Neanderthals serving as a reservoir for infection results in widespread pandemic in the homo sapien population in Africa and their eventual wipeout[1-17].

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