World Academy of Science, Engineering and Technology
International Journal of Medical and Health Sciences
Vol:11, No:02, 2017

Awareness Creation of Benefits of Antitrypsin-Free Nutraceutical Biopowder for Increasing Human Serum Albumin Synthesis as Possible Adjunct for Management of MDRTB or MDRTB-HIV Patients

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Abstract : Except for a preexisting liver disease and malnutrition, there are no predilections for low serum albumin (SA) levels in humans. At normal reference levels (4.0-6.0g/dl) SA is a universal marker for mortality and morbidity risks assessments where depletion by 1.0g/dl increases mortality risk by 137% and morbidity by 89%.It has 40 known functions contributing significantly to the sustenance of human life. A depletion in SA to <2.2g/dl, in most clinical settings worldwide, leads to loss of oncotic pressure of blood causing clinical manifestations of bipedal Oedema, in which the patients remain conscious. SA also contributes significantly to buffering of blood to a life-sustaining pH of 7.35-7.45. A drop in blood pH to <6.9 will lead to instant coma and death, which can occur after SA continues to deplete after manifestations of bipedal Oedema. In an intervention study conducted in 2014 following the discovery that “SA is depleted during malaria fever”, a Nutraceutical formulated for use as treatment adjunct to prevent SA depletions during malaria to <2.4g/dl after Efficacy testing was found to be satisfactory. There are five known types of Malaria caused by Apicomplexan parasites, Plasmodium: the most lethal being that caused by Plasmodium falciparum causing malignant tertian malaria, in which the fever was occurring every 48 hours coincides with the dumping of malaria-toxins (Hemozoin) into blood, causing contamination: blood must remain sterile. Other Apicomplexan parasites, Toxoplasma and Cryptosporidium, are opportunistic infections of HIV. Separate studies showed SA depletions in MDRTB (multidrug resistant TB), and MDRTB-HIV patients by the same mechanism discovered with malaria and such depletions will be further complicated whenever Apicomplexan parasitic infections co-exist. Both Apicomplexan parasites and the TB parasite belong to the Obligate-group of Parasites, which are parasites that replicate only inside its host; and most of them have capacities to over-consume host nutrients during parasitaemia. In MDRTB patients the body attempts repeatedly to prevent depletions in SA to critical levels in the presence of adequate nutrients and only for a while in MDRTB-HIV patients. These groups of patients will, therefore, benefit from the already tested Nutraceutical in malaria patients. The Nutraceutical bio-Powder was formulated (to BP 1988 specification) from twelve nature-based food-grade nutrients containing all dedicated nutrients for ensuring improved synthesis of Albumin by the liver. The Nutraceutical was administered daily for 38±2days in 23 children, in a prospective phase-2 clinical trial, and its impact on body weight and core blood parameters were documented at the start and end of efficacy testing period. Sixteen children who did not experience malaria-induced depletions of SA had significant SA increase; seven children who experienced malaria-induced depletions of SA had insignificant SA decrease. The Packed Cell Volume Percentage (PCV %), a measure of the Oxygen carrying capacity of blood and the amount of nutrients the body can absorb, increased in both groups. The total serum proteins (SA+ Globulins) increased or decreased within the continuum of normal. In conclusion, MDRTB and MDRTB-HIV patients will benefit from a variant of this Nutraceutical when used as treatment adjunct.

Keywords : antitrypsin-free Nutraceutical, apicomplexan parasites, no predilections for low serum albumin, toxoplasmosis
Conference Title : ICTT 2017 : International Conference on Tuberculosis Therapy
Conference Location : London, United Kingdom
Conference Dates : February 16-17, 2017