CHAPTER 8

MAIN FINDINGS OF THE PRESENT THESIS AND FUTURE PLAN

8.1 MAIN FINDINGS OF THE PRESENT THESIS

8.2 FUTURE PLAN
8.1 MAIN FINDINGS OF THE PRESENT THESIS

An introduction of paralysis (Hemiplegia and Paraplegia) and related neurological perturbations is given in chapter 1. This chapter describes mental changes in paralysis in brief. Introduction of paralysis Hemiplegia and Paraplegia and its different types, definition, causes, symptom, complication, transmission, prevention, diet treatment complication are described as a prelude to several complex experimental studies reported in the subsequent chapters. This chapter also includes the social aspects of paralysis and procedures for care of paralytic patients.

In chapter 2, we report our studies on the process of immunodulation. Level of immunoglobulin G (IgG), immunoglobulin M (IgM) and immunoglobulin A (IgA) in paralysis (Hemiplegia and Paraplegia) have been measured by Mancini’s radial immuno diffusion technique. When we compared our measured results on the levels of IgA, IgG and IgM in paralysis (Hemiplegia and Paraplegia) with normal healthy controls then we arrived at very interesting features. All the three immunoglobulins are found to be highest in paralysis. IgG is minimum in normal healthy controls. The mean level of IgM is double in normal healthy control as compared to diseased person and the mean level of IgA is near about to diseased.

Studies on complement C3 and C4 in paralysis and healthy controls are presented in chapter 3. Our main findings are the coefficients of correlation between the concentrations of C3 and C4 complements which is found to be 0.464 (positively correlated) in paralysis while in normal healthy controls it is found to be -0.026 (negatively correlated). We therefore conclude that the concentrations of these two complements C3 and C4 are positively correlated in paralytic disorders. A therapy based on pharmaceuticals aiming at reduction or increase of any of these complements must take into account the impact it will have on the other complement.
In chapter 4, we present our studies on the levels of trace elements in normal healthy controls and patient having paralysis (Hemiplegia and Paraplegia). All taking standard anti-conculsive drugs and food which we control the trace level of patient level of Zn, Cu, Fe, Ca, Mg, Na and K in the sera of paralytic (Hemiplegia and Paraplegia) and healthy control persons were examined using the spectrophotometric technique.

Our work is more extensive because we have carried out studies on Fe level also and examined all the possible double, partial & multiple triple correlations between Zn, Cu, and Fe levels. Similarly, we find that the mean level of Na, K and Ca are nearly equal to normal and the mean level of Mg is high in paralytic patient as compared to normal healthy controls. Student-t test is applied to all these results and it is found that there is an appreciable difference between Na, K and Mg values, respectively at 2% level of significance while there is no significant difference between Ca values at 2% level of significance.

In order to comprehend the basic process and the causative processes responsible for paralysis (Hemiplegia and Paraplegia), we have investigated the peculiar characteristics of paralysis serum using nuclear magnetic resonance (NMR) spectroscopic technique in chapter 5. High resolution NMR studies are carried out on screen of patients suffering from paralysis (Hemiplegia and Paraplegia). Results are compared with normal healthy controls.

The NMR spectra of the normal persons and paralytic patients were recorded on AvBruker 500 MHz NMR Spectrophotometer in central NMR facilities in IIT Roorkee.

Our main findings are to observe that chemical shift in water peak (D₂O peak) in all the cases may be due to pathological conditions. We have found peaks in all the spectra recorded on NMR due to the formation of some active centre's such as...
paramagnetic ions. The comparison of the diseased sample spectra with the normal healthy controls reveals some characteristics of the disease.

It is possible to identify the nature of the pathological disorder by looking at the NMR spectrum of patient’s blood. It has been found that the peak intensities, line shapes and chemical shift were different. These basic properties suggest that there are perturbations present which vary from sample to sample. These perturbations are due to the paramagnetic ions, in some cases such as Mn$^{++}$, Mg$^{++}$ and Ca$^{++}$ as well as due to the presence of some unpaired electrons. The chemical shift suggests a transfer of electrons in enzymes and proteins in paralytic disorder. The dipolar anisotropy of unpaired electron causes a shift in line position. We have found the present study that the groups related to serine, threonine and histidine were completely absent in all the paralytic disorder cases.

In chapter 6, IgG extracted from the blood of paralytic patient (Hemiplegia and Paraplegia) cases has been examined by the Ultra-violet spectroscopy. The prime object of the present work is to locate the chemical alternation in paralysis (Hemiplegia and Paraplegia).

Our main findings are that tryptophan and phenylalanine peaks are coming in patient suffering from paralysis and tyrosine content diminishes highly in paralytic patient. We have succeeded in obtaining our aim of studying IgG concentration. The appearance or disappearance of these specific paralytic signals helps us in navigating the therapeutical management of the paralysis disorders.

In Chapter 7, the work has a strong potential indicating the diet which must be taken by the paralytic patients and in navigating the therapeutical management of the patient. Structural change occurring in IgG in paralysis (Hemiplegia and Paraplegia) have been examined using FTIR spectroscopic technique present work shows that in paralysis.
Our main findings are that FTIR spectroscopy is a well established experimental method for studying the structural composition and dynamics of proteins. A correlation between the spectra and protein structure has been well documented. We would like to add here that some amino acid residues, especially arginine, asparagines, glutamine, asparatic and glutamic acids, lysine, tyrosine, histidine and phenylaline have very fast absorption in the amide band region.

Many diseases generate specific changes in the metabolic pattern of blood or other body fluids. These changes may produce particular spectroscopic indications which can be used for identification and classification of the diseases in seconds to minutes. Amide IV band is also found in the present work only in the two cases of paralysis. Absence of this band in other cases is a remarkable change. These patients were followed by the proper medication with standard drugs.

The bands due to phospholipids [P-O-C] are found in the paralytic patients and absent in healthy controls. This technique is able to detect these bands and give clear cut indication something is hidden inside the IgG molecule.

8.2 FUTURE PLAN

Health is the supreme possession of a homosapien. What so ever has been done in this area is like a drop in the ocean because what so ever is always done in petty, the undone is vast, undoubtedly and the world is suffering from this fatal disease. We have to make the world a happier and healthier place to live in.

The spectroscopic examination of the patients and the normal healthy controls studied by me reveal the difference in their blood composition. The researchers are advised to invent some medicine to cure the disease and make the blood normal. Certainly prevention is better than cure. Fast food and junk food must be entirely given up. One must take balanced diet in order to get rid of this lethal disease. A person must
lead a life in the health given surroundings of nature. In case, the neurons are healthy and in the right order, we will never fall a victim to Paralysis (Hemiplegia and Paraplegia). One must consult a neurologist in early stages of the disease because in the later stage every disease becomes chronic and dangerous.

I hope the work done by me will prove itself to be a master piece in the area of Bio-physics.