

The Effect of Rays Resulting from Communication Signs On Blood Variables in Humans

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Abstract: This study was conducted to clarify the effect of electromagnetic waves for the mobile phone on some biochemical tests. In human blood serum who use mobile phones excessively, 60 samples were used. They were divided into two groups, each group contained 30 samples. It was observed through the results that appeared that there are very clear differences in all tests of kidney and liver function and there are clear significant differences in all tests of kidney and liver function. This imbalance in liver function may be attributed to free radicals formed as a result of exposure to EMW, which may affect the composition The liver and kidney tissue it is affects the control mechanism of the secretion control mechanism, enzymes necessary to carry out the life activities of the human body, as the liver may be healthy, but the instructions that reach it are not .It is proportional to the actual need of the body and ultimately the secretion of these enzymes is affected

Key words: mobile phone, electromagnetic waves, enzymes, biochemical tests

INTRODUCTION:

MP (Mobile) phone is a mobile device at present It is an integral part of our modern daily life.

Recently the public awareness has increased

The scientific research questions the extent of susceptibility to exposure to a low intensity of electromagnetic waves (EMW). Electromagnetic waves, which may affect the health, reproduction, and behavior of humans and other organisms. Some were taken. Researchers and National Committees are stringent safety criteria based on experimental data with reports on biological effects of exposure. Chronic thermal radiation, including electromagnetic waves, for mobile phones. With the advancement of the modern age of technology, humans have had to use some devices that lead to exposure to different radiation. It is a source of great danger to his health, especially the pregnant woman and the fetus. Especially after the spread of MP and its widespread use of. Before humans, and its use of various household appliances that give EMW

more than it is in the natural field, such as exposure to ultraviolet radiation .Violet at different lengths, as well as exposure to ultrasound and its various effects on the body's systems. The interest in the potential dangers arising from the effects of MP use has increased as the number of MP users has dramatically increased. The past few years. Whereas, MP uses Radio frequency electromagnetic radiation (RF-EMR) technology. This increases the severity of exposure to electromagnetic radiation in our daily life.(Mailankot et al., 2009).

It becomes a frequency between MHz and our everyday interface, The MP device has become a mandatory tool for us in our daily life, and these phones operate with frequency bands between 400 - 2000 MHz and emit EMW (Agarwal et al., 2008). These phones operate at different frequencies, the difference relates to the frequency usage in countries Different. Concerns have increased about the potential dangers arising from the effects of RF-EMR on human health.(12). As for its effect on living organisms, it depends on the frequency and intensity of waves, and the risk of their impact on high frequencies . It is related to the high temperature of the body

Material and methods

1-Biochemical variables

We have had many tests (about 30 samples) for people who live near mobile towers and below are the tests done:

1-2 Estimation of the total protein amount

The amount of total protein in serum was estimated by using the Biuret method

Method using the ready-made analysis kit from the British Randox company approved by the researcher

. (11) Whit and Robyte

2-2 Estimate the amount of urea in blood serum

The amount of urea in serum was estimated by relying on the previously used method BioMerieux and his cohorts (12), using a ready-made analysis kit from researcher Searcy French

2-3 Estimating the amount of cholesterol in the blood serum:

The French in estimating the amount of Syrbio used a ready-made analysis kit provided by the company Richmond serum cholesterol, according to the enzymatic method used by the researcher Estimating the amount of cholesterol in the blood serum: The French in estimating the amount of Syrbio used a ready-made analysis kit provided by the company Richmond serum cholesterol, according to the enzymatic method used by the researcher

Urea:

Urea is a natural waste product that the human body produces after eating. The liver breaks down protein in food, creating urea (BUN). After the liver produces urea, it releases it into the bloodstream, so this substance ends up in the kidneys, which in turn work to get rid of them, leaving behind low amounts or levels of it in the blood.

It is worth noting that the kidneys get rid of urea through urine. Blood urea levels were measured in mg / dL. In general, the normal level of urea in the blood varies according to several factors, the most important of which are age and gender, in addition to the different laboratory in which the examination was carried out.

Normal value 12.6 _ 42.7 mg/dl

Creatinine:

This test aims to detect the levels of creatinine in the body, which gives a picture of how well the kidneys work. Undergoing this examination varies from person to person, and the matter can be interpreted as follows: People with kidney problems: Have this examination regularly, according to your doctor's instructions. Diabetics: They should have this test at least once a year Having a disease that may affect the functioning of the kidneys: such as high blood pressure, or even taking medications that affect the kidneys, so it is recommended that these people undergo an examination according to the doctor's instructions.

This test is a blood test, and it does not require any specific preparations before undergoing it . Sometimes a sample of urine may be taken to find out the percentage of creatinine in it, in order to know the severity of kidney failure more accurately. The level of creatinine in the blood is measured in milligrams per deciliter or micromol per liter, The normal creatinine level in the blood ranges from 0.84-1.21 mg per deciliter, which is equivalent to 74.3-107 micromol per liter. .

Triglyceride:

He defined triglycerides as fats carried in the blood and from the food that a person eats. Most fats in food, including butter and margarine, and other oils, are in the form of triglycerides. The

excess of calories, alcohol and sugar in the body turns into triglycerides, which are stored in fat cells throughout the body. (11)

Result and discussion

Studied groups	N	B. Urea (mmol/ L)		
		Mean	SD	SE Mean
Cases	30	0.95	0.18	0.03
Control group	30	23.2	9.57	1.7

T. Test: 12.73 P. value: 0.001

Studied groups	N	S. creatinine (mg/dl)		
		Mean	SD	SE Mean
Cases	30	0.256	0.172	0.031
Control group	30	1.050	0.258	0.047

T. Test: 14.02 P. value: 0.001

Studied groups	N	S. cholesterol (mg/dl)		
		Mean	SD	SE Mean
Cases	30	221.9	57.2	10
Control group	30	139.3	11.8	2.1

T. Test: 7.75 P. value: 0.001

Studied groups	N	S. triglyceride (mg/dl)		
		Mean	SD	SE Mean
Cases	30	25.05	8.71	1.6
Control group	30	77.7	16.6	3.0

T. Test: 15.39 P. value: 0.001

Studied groups	N	S. HDL (mg/dl)		
		Mean	SD	SE Mean
Cases	30	49.93	8.03	1.5
Control group	30	25.50	6.98	1.3

T. Test: 12.58 P. value: 0.001

Studied groups	N	S. ALT (IU/L)		
		Mean	SD	SE Mean
Cases	30	20.48	7.00	1.3
Control group	30	6.50	3.13	0.57

T. Test: 9.99 P. value: 0.001

Studied groups	N	S. AST (IU/L)		
		Mean	SD	SE Mean
Cases	30	21.41	9.32	1.7
Control group	30	8.90	3.76	0.69

T. Test: 6.82 P. value: 0.001

Studied groups	N	S. Total protein (g/L)		
		Mean	SD	SE Mean
Cases	30	5.206	0.385	0.070
Control group	30	7.610	0.382	0.070

T. Test: 24.28 P. value: 0.001

Studied groups	N	S. Albumin (g/L)		
		Mean	SD	SE Mean
Cases	30	7.59	1.35	0.25
Control group	30	7.610	0.382	0.070

T. Test: 0.09 P. value: 0.92

We note from the above table that there are clear significant differences in estimating the level of urea in blood samples exposed to radiation from the mobile phone, and this difference is due to Urinary tract obstruction,(17) The results of the current study indicated that exposure to EMW to MP at a frequency of 900 MHz caused significant differences in The average level of blood parameters is generally in serum, and this difference is directly proportional to the increase in the duration of EMW exposure. These are the results It corresponds to what Al-Hakim (2006) reported that exposing pregnant rats to EMW at different frequencies led to differences in the level of EMW.H in serum. The results of the current study were also similar to that reported by Sahin et al. (21), which stated that exposure to EMW leads to an increase in the level of GSH in the body, and this is also indicated by (Lai, 2018). The reason for these significant differences can also be due to a defect in the functions of body tissues such as the liver or kidneys. This imbalance may be due to the occurrence of mutagenesis by These radiations are in the cells of this tissue Congestive heart failure or recent heart attack Gastrointestinal bleeding Dehydration, resulting from not drinking enough fluids or for other reasons , Shock, Certain medications, such as some antibiotics , high-protein diet. a high blood urea nitrogen level means your kidneys aren't working well. A clear decrease in the rate of keratinization in the blood of those exposed to the mobile rays was also observed, and the reason for this decrease may be due to the occurrence of insufficient liver function. Through the study, it was noted that there is a significant increase in cholesterol, which is due to a defect in the activity of the liver . The presence of these significant differences in blood variants tests between samples exposed to mobile rays and samples that are not exposed may be according to a study performed by doctors from German city of Naila a newly diagnosed cancer, rate is three times higher for those living within 400 meters of mobile phone towers than those living far away. (21)Breast cancer was one of the most observed while that of prostate, pancreas, bowel, skin, lung, and blood also increases.(18)

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