

pesticide-contaminated well water may provoke Parkinson's disease. Other studies demonstrated that drinking 1.5 L of excessive water can assist weight reduction in patients with common multifactorial disorders, like obesity.

Conclusions. The research has demonstrated that the water role is immense, and in many cases can delay or accelerate different human multifactorial conditions, depending on its quality and quantity.

WBAN (WIRELESS BODY ACCESS NETWORK): MANAGING ILLNESS FOR MANAGING WELLNESS BY FOCUSING ON PREVENTION AND EARLY DETECTION

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Introduction. Definition by IEEE 802.15.6 is a communication standard optimized for low power devices for their operation on, in or around the human body (but not limited to humans) to serve a variety of applications including medical, consumer electronics or personal entertainment and other. How they addressed the need? A wireless body area network (WBAN) is a collection of wireless sensor nodes that are situated either inside or outside the human body for monitoring the outside environment and functions of the body.

Aim. This study was related to realize WBAN strategy.

Materials and methods. Analysis of scientific sources was done concerning the problem.

Results and discussion. Wireless Body Area Network allows the integration of intelligent, miniaturized, low power sensor node in, on or around a human body to monitoring body function. WBAN is a network around the human body. It senses biological, physical, chemical changes of our body and alarms the person who wears it. It also helps in automedication in case of emergency; it sends the information throughout the world through internet.

Sensors-biodegradable device is constituted by: transceivers – devices transmit and receives data; processors – master the functioning of all components in the WBAN; battery – supplies power. WBAN Sensor consists of an intelligent node which is capable of sensing, sampling, processing, communicating. Below are some example of WBAN sensors: ECG (electrocardiogram) sensor for monitoring heart activity; EMB (electromyography) sensor for monitoring muscle activity etc. WBAN is easily accessible by in or out body it saves a lot of time and has a bio-feedback: for example if high sugar level, a device triggers an insulin pump to also inject a dose of insulin (artificial pancreas). The solutions should be efficient in such a way that the low-energy sensor devices can be able for functioning the entire implementation. As well as data security and data confidentiality must be maintained and unauthorized accesses should be prohibited.

Conclusion. WBAN has benefits to patients, medical personnel and society by continuous monitoring and early detection of possible problems, also improving the quality of life and collected multidifferent parameters from body.

LEAKY GUT SYNDROME AND ITS GENETIC PREDISPOSITION

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Introduction. The body has more bacterial cells in the gut than is found in the entire human body. most of the chronic diseases our society faces today is linked to deregulated gut flora or dysfunctional gastrointestinal system such as Celiac disease, Crohn's disease and irritable bowel syndrome, autoimmune diseases of type 2 diabetes, multiple sclerosis,

Aim. This study is targeted at investigating the predisposing factors and impacts of leaky gut on human and ways of maintaining a healthy gut.

Materials and methods. Descriptive method was used based on the analysis of over 17 recent scientific journals, articles and reviews.

Results and discussion. Our gut is home to approximately 100 trillion micro-organisms; it is such a big number that the human brain can not really comprehend it. In pathologic conditions, the permeability of the epithelial lining may be compromised allowing the passage of toxins, antigens, and bacteria in the lumen to enter the blood stream creating a “leaky gut.”

In individuals with a genetic predisposition, a leaky gut may allow environmental factors to enter the body and trigger the initiation and development of autoimmune diseases including chronic fatigue syndrome, fibromyalgia, arthritis, allergies, asthma, acne, obesity and even mental illness which are the major and common human ailments of the 21st century. The symptoms of leaky gut can vary drastically from person to person and some people can have gut problems for a long time without symptoms, the gut flora promotes normal gastrointestinal function, provides protection from infection, regulates metabolism and comprises more than 75% of our system.

However additional studies are still required for further clinical evidences in human as major health problems resulted from intestinal permeability.

Conclusion. Recent reports have shown that a combination of principles from GAPS (gut and psychology diet's) and SCD (specific carbohydrate diets) that focuses on reducing inflammation, as well as control of excess antibiotics usage, are potential method for regulating intestinal permeability, Probiotics can reverse the leaky gut by enhancing the production of tight junction proteins in susceptible individuals.

EVALUATION OF SPASMOLITICAL ACTIVITY OF CHINOCARB ON RAT ISOLATED FRAGMENTS OF THE THORACIC AORTA AND RENAL ARTERY IN VITRO

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Introduction. According to the results of previous studies, the substance of chinocarb with 7-day intragastric administration in a dose of 10 mg/kg of experimental hypertensive rats has antihypertensive effect, the severity and duration of which is slightly inferior to the activity of enalapril (5 mg/kg) and is equal to the corresponding effects of hydrochlorothiazide (10 mg/kg). The realization of hypotensive effects of a substance is not accompanied by side effects from the electrolyte and metabolic profile of the blood, which distinguishes it favorably from the reference drugs.

Aim of this work was *in vitro* on the model of an isolated fragment of the thoracic aorta and renal artery of rats under the conditions of the previous phenylephrine restriction to investigate the effect of the new derivative anilide quinoline-2-carboxylic acid (chinocarb) as a myotropic antispasmodic.

Materials and methods. The study of myotropic spasmolytic activity of chinocarb was performed on rats of both sexes of the Wistar line weighing 150-190 g. The isolated rings of the thoracic segment of the aorta and rings of the right renal artery were used in the studies. The level of spasmolytic effect was calculated as a percentage relative to the level of maximum tonic pressure caused by phenylephrine (1 μ mol/L). To calculate the average effective concentration ($\log EC_{50}$), a graphical method for constructing the dose-effect curves using Origin 7.5 (OriginLab Co., USA) was used.

Results and discussion. Studies have shown that for the drotaverine the concentration range used to construct the dose-effect curve was in the range of 10^{-10} to 10^{-2} mol/L. The spasmolytic effect began to manifest at a concentration of 10^{-10} mol/L ($0,09 \pm 0,0005$ mN). The maximum value was recorded at a concentration of 10^{-2} mol/L ($0,11 \pm 0,0003$ mN), EC_{50} thus comprised $1,63 \times 10^{-8} \pm 0,39 \times 10^{-8}$ mole of muscle cells of the thoracic aorta/L, $p < 0,05$, on muscle cells of the renal artery - $2,04 \times 10^{-8} \pm 0,51 \times 10^{-8}$, $p < 0,05$. Investigations of the chemokine's spasmolytic activity have shown that the new compound exhibits dilatatory properties. Chinocarb showed a minimum dilatatory activity at a concentration of 10^{-10} mol/L ($0,05 \pm 0,001$ mN) with a maximum at 10^{-2} mol/L ($0,11 \pm 0,0006$ mN). The concentration, which represents half the maximum effect on the isolated rings of the thoracic segment of the aorta and renal artery of rats, was $7,29 \times 10^{-8} \pm 1,23 \times 10^{-8}$ mol/L, $p < 0,05$ and $6,81 \times 10^{-8} \pm 1,19 \times 10^{-8}$, $p < 0,05$, respectively.

Conclusions. The substance of chinocarb has a sufficient antispasmodic effect compared with classical spasmolytic drug drotaverin.