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DERMATOGLYPHIC AS AUXILIARY METHOD FOR DIAGNOSIS OF BRONCHIAL ASTHMA IN CHILDREN

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Introduction. Recently the dermatoglyphic patterns have proved to be of diagnostic value in certain clinical disorders associated with chromosomal and developmental defects, like mongolism, mental retardation, Turner syndrome, cardiovascular diseases, diabetes, and schizophrenia. In early fetal life dermal ridge differentiation occurs. It is genetically determined, and is influenced by physical, topographical, and environmental forces. Probably, the blood supply and nerve supply also modulate the dermatoglyphic patterns. Asthma is a chronic condition involving the respiratory system in which the airways occasionally constrict, become inflamed, and is lined with excessive amounts of mucus.

Aim of the study. So the present work was undertaken in the Regional Children Hospital to study: 1. To find out a specific dermatoglyphic pattern in the patients with bronchial asthma which may have diagnostic value. 2. To find out the dermatoglyphic patterns in the first degree relatives to prove the familiar tendency of the disease.

Materials and methods. Dermatoglyphic prints were obtained from 40 patients of bronchial asthma (group 1) and 40 relatives of these patients (group B). 40 healthy individuals (group C), not suffering from bronchial asthma with negative family history were selected as control group. All the patients were having long standing bronchial asthma with seasonal variation. The prints were taken using kores duplicating ink on plain white glossy drawing paper. The prints were studied with the help of a hand lens. The following parameters like whorls, loops and arches were studied, tabulated and analysed by statistical methods.

Results. Preponderance of whorls pattern in most digits in group A and B as compared with group C. The presence of whorls on both the thumbs was a constant feature in all children of group A which is statistically proved. No significant difference of the preponderance of the whorls was found in group B (relatives) as compared to group C (controls).

Discussion. Various diagnostic criteria are available for diagnosis of bronchial asthma. Apart from advances in medical diagnostic procedures, the diagnosis of bronchial asthma is difficult, as patients with asthma are heterogeneous and they present a wide spectrum of signs and symptoms which vary in severity, from patient to patient and from season to season. So to help the diagnosis of bronchial asthma, the dermatoglyphics patterns may prove a great help. Since then it has become a valuable tool in medico legal, anthropological and genetic studies. In the present study the incidence of whorls on both thumbs of patients of bronchial asthma were significantly higher.

Conclusion. Presence of whorls on both thumbs of children's of bronchial asthma can be used as one of the diagnostic criteria for bronchial asthma.

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THE FEATURES OF THE CHRONORYTHMS STRUCTURE OF EXCRETORY KIDNEY FUNCTION UNDER THE HYPOFUNCTION OF THE PINEAL GLAND

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Currently the chronoperiodic aspects of neurohumoral and intracellular mechanisms regulating the homeostasis remain one of the most pressing issues in modern physiology. The research results are not only valuable scientific contributions, but also create new direction in the optimization measures for the treatment and prevention of many nosologies, as well as a deeper understanding of the mechanisms of adaptation of biological systems in the environment.

Kidneys, occupying an important place in providing dynamic balance of internal environment, as well as any other biological system, are characterized by distinct temporal organization functions.

Literature data provide undeniable evidence with key epiphyseal hormone melatonin in the formation circadian frequency of excretory renal function. Less studied is the impact of constant light on the regulation of the pineal gland excretory renal function.

The purpose of our study was to find out the particular chronorythms structure of excretory renal function under hypofunction of pineal gland.

The animals were divided into two groups. First – control. In the second group of animals we studied chronoperiodic characteristics of rat's excretory renal function under hypofunction of pineal gland.

In experimental rats hypothyroidism of pineal gland by keeping under continuous illumination (24.00S:12.00S) within 7 days was modeled. To monitor and compare the effects of changes in photoperiod in this series we used the results of parallel studies in groups of control animals.

Biorhythm of excretory renal function at the end of the experiment was investigated with the 4-hour intervals provided 5.0% of water stress.

As a result of experiments, we found that adjusted chronoperiodic excretory renal function in animals that were under pineal gland hypofunction was more pronounced than in animals of the control group.

Chronorythms diuresis acquired a two-phase structure, losing sinusoidal nature of rhythm. Thus the observed bias acrophase from 8.00 h to 4.00 h compared to those of control animals.

Similar changes were due to disruption of ultrafiltration. Methor rate was 47% significantly lower than in control animals. Glomerular filtration rate significantly decreased at all times of day. Chronorythms glomerular filtration acquired single-phase character of the highest figure at 20.00 hrs.

These changes are caused by a decrease in relative water reabsorption during the period of observation.

Hypofunction of pineal gland leads to a possible reduction in glomerular filtration rate in all periods of the day. Suppression of the pineal gland leads to decrease in relative water reabsorption and increased creatinine concentration in plasma of rats during the period of observation. Among the major manifestations of disorders in animals with suppressed function of the pineal gland was marked decrease in the concentration of potassium in the urine.