

The carried out research testified that the content of somatostatin in the pancreatic gland tissue of fetuses and newborns depends on the age factor significantly. A further study of the fetuses' pancreatic gland insulars' cellular composition using the immunohistochemical method will specify the phenotypically conditioned features of the organ's morphogenesis.

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BIOMEDICAL ENGINEERING IN RAISING EFFICIENCY OF EMOTIONAL PROCESSES DIAGNOSTICS

Yatsenko A.F.

PSEU

Vladivostok, Russia

Evidence of emotional marking can be found everywhere in modern medicine. Our study of the emotional and behavioral problems of homeless children are connected with the portable ear-scanners that produce detailed images of internal segmentary trophic centers. Our device allows to receive data performed by image-guided computer instrument. By the registration of the skin resistance changes from the skin surface of an auricle the long-term statistical material we had received by removal ear-scanned topograms of epidermis various activity at healthy and sick conditions. As a result of special processing topograms of electrophysiological parameters of a skin («an instant portrait») a lot of stationary and dynamic processes at a segmentary level in body's vegetative department in a super slow range of frequencies were possible to register conditions of all. Our biomedical engineering device (computer-based skin-scanner)

have been designed and produced by engineers working in collaboration with doctors, biochemists, physicists, and microbiologists. Also the use of our biomedical engineering device are directed in many kinds of treatments, especially in diagnosis and maintaining the basement health functions that are affected by disease or injury. On a ratio of values of base functions in one segment the pathological center is allocated, inflammatory process is classified on a phase, the belonging to concrete body or its part is defined. The objectives of the study were to explore opportunities of the registrations of changes of skin resistance in study the emotional profile of homeless children being considered for deviant behavior, and evaluate the relationship between child emotional and behavioral problems and use of registrations of skin resistance changes. The computer-based method consists in measuring the epidermal resistance of human auricles by scanning them. A sample of 125 youth (between 9 and 11 years old) who were homeless and children from permanent placement were estimated. These children have complex needs. We found significant differences by deviant behavior between homeless boys and girls and boys and girls from permanent housed group, as follows (ANOVA-F=6,68, $t=2,58$; $p<0,05$) and (ANOVA-F=16,47, $t=4,07$; $p<0,05$). The comparison of the revealed parameters with results of other methods of investigation has shown perspectives of informational making up a diagnosis by using this approach. Using ear-external sensors will be able to continuously measure response to treatment. It allows to use computer-based device by the people who look after the patient who will not be medically qualified but will be highly skilled technicians trained in specialized diagnostic and therapeutic devices and procedures. We recommend our device for everyone who may have access to regular non-invasive screenings to detect disease as early as possible.

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