

“HOLO-IMAGING”: THE PRINCIPLE OF HOLOGRAPHY AND ITS PRACTICAL APPLICATION

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A previously unknown dynamic mechanism responsible for the integration of biological systems into a united “whole” has been determined several years ago while studying emanations of human body in electromagnetic fields of various frequencies [1]. The reliability and validity of this novel source of biological information was tested in approximately ten thousand subjects over the past decade resulting in the conclusion that a dynamic functional system of previously unknown type ensures almost instant propagation of the information throughout entire biological object [2]. The mechanism allowing dynamic communication and imprinting of non-local information within a given organism is defined as the “holo-informational functional system” (HIS).

HIS represents a multi-scale dynamic interaction of ordinary physical substances with fields and waves of a known nature. The organization of fragile waves is mutually dependent upon the dynamics and distribution of all solid substances (molecules, cells, organs...) within the space-time of a system. Being a volume holographic structure, which functions in synchronicity with metabolic processes, HIS plays the role of a system-integrating factor. Moreover, this holographic mechanism allows the acquisition of replicas of the most disordered parts of a system using emanations from only a part of the whole, e.g., human fingertips (fig.1, 2).

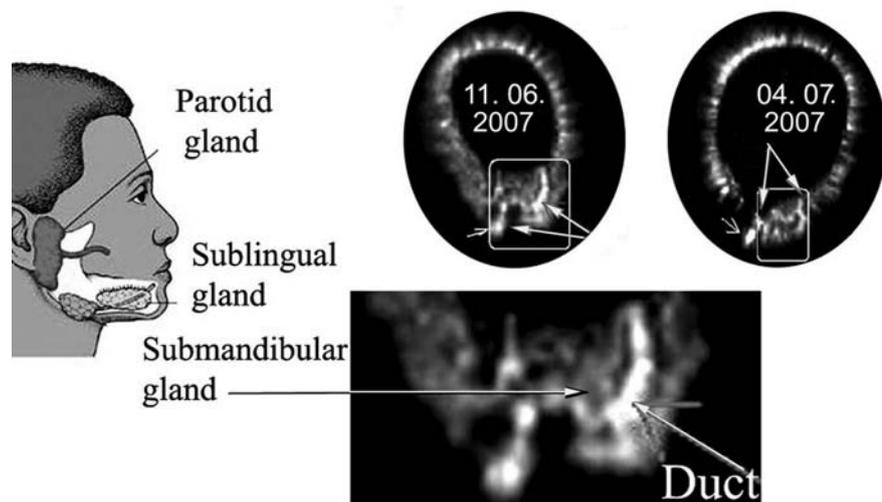


Fig.1 – Holograms of swollen glands in head/neck area. Similar replicas of the most affected area are displayed on fingertip coronas (two non-processed records of a finger are shown)

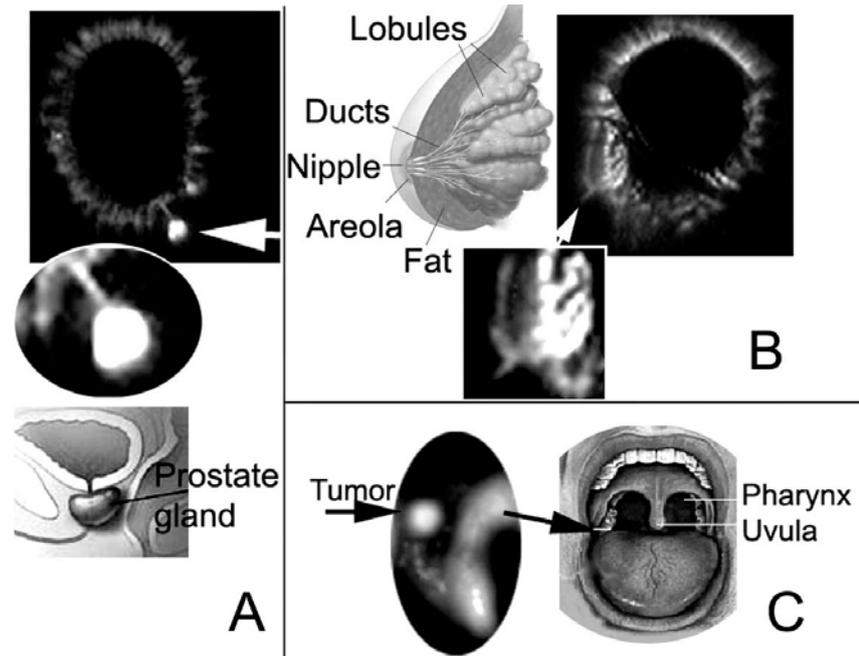


Fig.2 – Holograms of malignant tumors. A, B - records of fingertips' emission and zoomed parts of the same coronas; C – replica of early stage cancer in the patient's pharynx (BHT conducted 11 months before cancer has been clinically manifested)

The physical effect discovered in various dynamic systems of natural origin has been defined as “the phenomenon of holo-diffraction” [2, 3]. Technology that is presently used for the acquisition of emitted biological holograms represents a modified analogue of gas-discharge visualization device (patented). In the current procedure, all ten fingertips are exposed to a high-frequency pulsed electromagnetic field (1000-5000 Hertz). This particular technique of examination is named “bioholotomography” (BHT), since novel modality allows the evaluation of biological processes at several levels of system-hierarchy. Being totally painless, the short-term procedure of BHT-examination (each finger is exposed to electromagnetic field for 2 seconds) is also proved to be safe for patients, operators and the environment.

Results of a blinded, controlled clinical trial described below demonstrate that emission of human fingertips is equally informative regarding the detection of malignant processes in entire body. A group of 35 subjects has been randomly selected by the P. A. Herten Research Institute of Oncology (Moscow, Russia). Nineteen of these individuals were suspected of having tumors of the thyroid or mammary glands, while 16 subjects comprised the control group. Records of patients' fingertip emission were sent from Moscow to the main Center of Bioholography (Tbilisi, Georgia) as e-mail attachments. Standard examination using ultrasound, X-ray methods and cytological analysis of specimens was conducted to verify BHT diagnoses.

The BHT examination resulted in a correct diagnosis in 30 cases out of the 35 with two false-positives and three false-negative results. The final conclusions were made by the P. A. Herten Research Institute of Oncology following a comparison of BHT data with standard methods of clinical diagnostics. Of particular interest is that the preliminary results of the trial were later revised when two cases, reported as having cancer (via the BHT examination) but originally included in the control group, were subsequently diagnosed with early-stage malignant pathology (an early case of mammary gland carcinoma and a case of thyroid gland cancer).

Although the results of this small trial are compelling, they are not sufficient to accurately determine the overall sensitivity and specificity of the BHT-technology. However, the high percentage of accurate diagnoses (86%) found in this blinded,

randomized trial points to the importance of a holography-based approach to the diagnostics regarding both - the evaluation of entire system's states and the acquisition of visually interpretable images of actual problematic areas ("holo-imaging").

The principle of holography has been intensively studied not only in optics, but also in theoretical physics and cosmology [4-7]. Some manifestations of this principle were determined in biological systems as well [8], though the interference of human factors with results of instrumental data reduced the reliability of this evidence.

The physical nature of HIS differentiates it from more colloquial terms such as "biofield" and "morphogenetic field," which are often vague and non-descript references to non-physical entities. The contradictory concept of morphogenetic field was first postulated by Boveri in 1910 [9] and expanded by Russian scientist, Alexander Gurwitsch [10,11]. Gurwitsch theorized that cells might use radiation as a means of communication with other cells creating a virtual framework for growing organism. Regardless of the plethora of supporting experimental evidence, with the awakening of interest in the gene as the primary and/or exclusive realm of inheritance and individual development, focus of biologists on field/wave effects waned. Lately a growing number of new facts contributed to a renewed interest in those forces that might be responsible for non-local biological effects [12, 13].

The study of structural and functional biological processes via the assessment of non-perturbing technique of holo-imaging represents an exciting and potentially revolutionary new frontier in Biomedicine. Moreover, the discovery of previously unknown physical phenomenon would also help to establish a critical new level of understanding in several theoretical branches of science.

Basing upon recent data and theories concerning various self-organizing systems of natural origin, one may deduce that the principle of holography is more fundamental in our Universe than was previously suspected.

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