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Natural autoantibodies as markers of any chronic disease

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Ours more than 20 years experience indicates: cancer (different forms), diabetes (types I and II), very different chronic diseases of the liver, stomach, gut, lungs, kidney, heart, vessels, etc., all has accompanied obligatory by steady rise or, more rarely, by decrease of the serum autoantibodies (a-Abs) specifically binds to antigens of the injured organ. Those changes can be detected during the phase of active development of the pathology, but ceased if the disease stopped spontaneously or after effective treatment (Poletaev et al., 2000-2013; Matzinger, 2011). Changes in the production of such a-Abs are secondary in the most cases, and does not relate with the "autoimmune nature" of the disease. Why it is so? The most ancient and important function of natural autoimmunity is autoclearance which is intrinsically based upon phenomena of self-recognition. A multitude of immune functions, including antimicrobial defense, derives from autoclearance. Pathological processes of any kind in any organ accompanied by the rise of apoptosis (necrosis) of the resident cells and/or abnormality in expression or degradation some organ-specific molecules (receptors, enzymes, etc.). Both lead to changes in the extracellular concentration of intracellular components. These events induce the secondary rise in production of autoantibodies with appropriate specificity (opsonines), which provides augmentation of clearance by facilitating the efficacy of macrophage-dependent consumption of debris in the affected organ. Physiological *Autoimmune* reactions of such kind are sanogenic in essence, and aimed to augmentation of effectiveness of clearance of the affected organ. Much more rarely the primary rise of autoantibody production (not related to the real needs of organism and not associated with pre-existing disease of organ or tissue) can be detected. These *Autoimmune* reactions are pathogenic and may accompany by different clinical consequences. Population frequencies of physiologic, adaptive (secondary) autoimmune reactions and pathogenic (primary) autoimmune reactions may be roughly evaluated at least as 95 or more to 5.

We suppose quantitative changes in the serum autoantibody profiles (specific for any pathology) should be considered as a universal marker for any of chronic diseases and may be detected months or even years before the appearance of clinical signs of disease. Therefore, analysis of quantitative changes in the serum content of natural autoantibodies may become an effective instrument for early pre-clinical and detection of pathological processes with different organic location. Future investigations in this field may result in revision of the main paradigm of the modern medicine (DISEASE–TREATMENT), and transition to the new one (PROGNOSIS–PREVENTION).

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