The role of glycocalyx in QBS diagnosis of Di Bella's Oncological Terrain

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"Nothing rests; everything moves; everything vibrates."
The Kybalion.

Introduction

Quantum Biophysical Semeiotics (1, 2), has made possible to evaluate clinically, for the first time, the functional anatomy of the glycocalyx, firstly in the Beta cell of the islets of Langerhans and those of the target organ of insulin (3, 9), and subsequently in the cells of all biological systems, including the diencephalic neuronal centers of PNEI – Psycho - Neuro - Endocrine - Immune - system, at the base of Di Bella's Oncological Terrain (2).

As known, the glycocalyx (or cell coat) is a cloak that covers the cell membrane and shows a complex structure primarily composed of glycoproteins, glycolipids and glycosaminoglycans, whose main representative is hyaluronic acid, synthesized in the cell itself by three different complex enzymes (3, 6, 7). From a functional point of view, the glycocalyx is part of the cell, on the one hand, and the interstitial tissue, on the other.

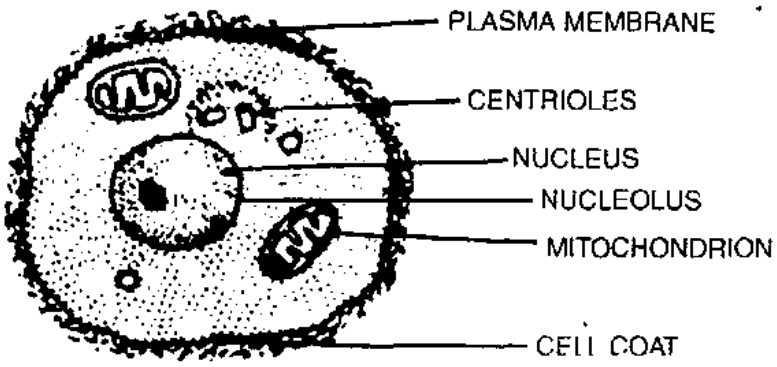

Figure 0. Cell coat or glycocalyx around the cell membrane

Many cellular receptors, including the hormonal one, sway as antennas in the glycocalyx, whose diameter is generally double that of the cell membrane. These receptors are stimulated by their effectors, according to two different and successive phases in accordance with Stagnaro discoveries (8, 9). The first phase has a catalytic nature and is simultaneous to the opening of the relative segment of the n-DNA aimed to the necessary information for the synthesis of its hormone at the time of its initial release, caused by the physician in different ways (8, 9).

The second phase, slower but prolonged, is represented by the binding of the hormone to its cellular receptor, with the activation of its post-receptor pathways, as taught by orthodox academic medicine. The glycocalyx actively participates and facilitate or hinder this binding according with the current structure, the movement of many vital substances, including water and electrolytes, which move from the cell to the interstice and the microvessels and vice versa.

The cell shape and continually renews its glycocalyx, whose structure and function obviously depends on the mode of being and functioning of the cell, revealed by the behavior of the respective Tissue Microvascular Unit, according to the theory of Angiobiopathy (1-6).

In previous works it has been demonstrated that the natural history of diabetes mellitus is characterized by five stages according to the QBS, following early direct genetic alteration of beta-

cells and insulin target cells, i.e., the cell-muscle skeletal function. The function of the glycocalyx in these tissues appears altered starting from the first decade of life, on average around at the age of five, characterizing the second stage of T2DM, which affects subjects at Real Risk of Diabetic, depending on their QBS constitution (3-5), so that the clinical diagnosis of DM is facilitated (6).

A refined method for assessing the glycocalyx of the neuronal cells of nerve nuclei of encephalics at the base of Oncological Terrain, OT (1, 2), in particular the SST-RH, is described in this paper (Fig. 1).

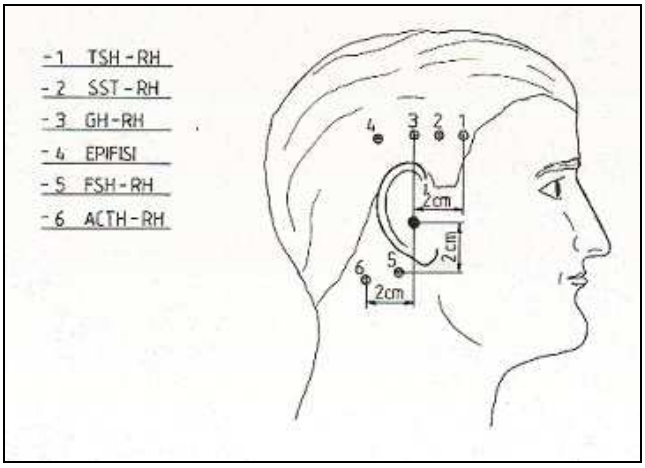

Figure 1
In the figure are indicated the trigger-points of different neuronal centers at the base of Oncological Terrain

From the first decade of life, at about five years old, typical functional alterations of glycocalyx in neuronal centers, as reported above, are observed by QBS in individuals with congenital Real Risk of Cancer dependent on Oncological Terrain.

As is known, structure and function are the two poles of the same equation: it is impossible to change one without affecting the other.

Clinical evaluation of the Oncological glycocalyx

The refined assessment of the Oncological glycocalyx is here described, targeting the medical experts in QBS. A detailed description of a simple method is below explained, applicable by those who know at least auscultatory percussion of the stomach (1, 2), shown on QBS website, Technical Page N ° 1.

In healthy individuals, at rest, supine, with open eyes to minimize the epiphyseal melatonin secretion, microcirculation in the SST-RH, measured as fluctuations in both upper (vasomotility = small arteries and arterioles, according Hammersen) and lower ureteral reflex (vasomotion = capillaries and post-capillary venules), show the physiological parameter values (Fig. 2).

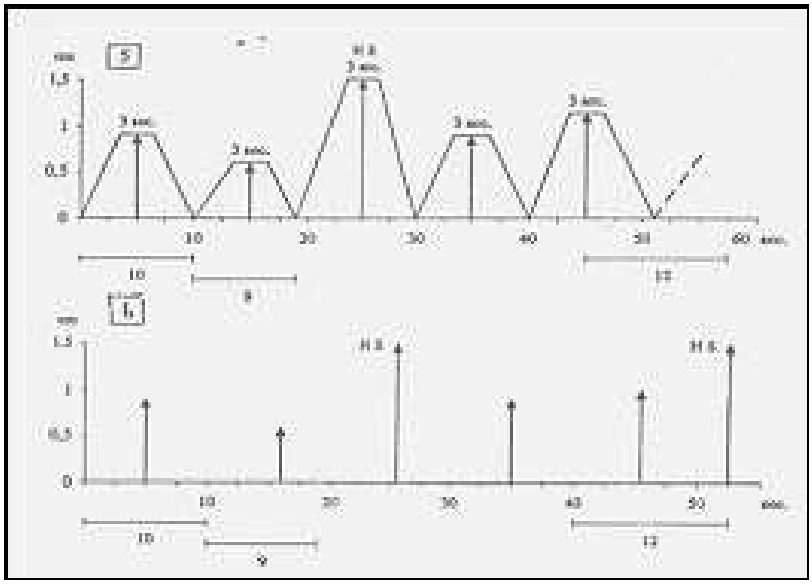

Fig. 2

Normal Microcirculation at rest: deterministic chaos in urethral fluctuation is observable; they are unpredictable, stochastic, random, AL+PL+DL = 6 seconds. There are physiological Highest Spikes (Intensity = 1, 5 cm) after 2 normal, intermediate fluctuations

However, only in the healthy individual, without OT, the stimulation by endogenous melatonin - blink test: the patient quickly closes his eyes - causes the "simultaneous" increase both of the intensity and of the duration of AL (Ascending Line) + PL (Plateu Line) + DL (Descending Line), demonstrating that the first phase of receptor activation (M1 and M2 receptors of the neurons in the center for the SST-RH), catalytic in nature, physiologically occurs.

The patient has to close the eyes at the precise moment when the vasomotility wave, arrived at the end of the PL, is going to start the terminal downturn, DL; this is in practice, 5 seconds after the start of the fluctuation. In this case, we observed a marked "simultaneous" increase in the intensity of the oscillation, whose duration is extended to 8-9 seconds (basal value, NN, = 6 sec.).

AL+PL+DL At rest	**AL+PL+DL After blink test**	**State of Health**
6 seconds	8-9 seconds	Negative OT
6 seconds	7 seconds	Positive OT

Table 1. Duration of the urethral oscillations at rest and after blink test

In contrast, in the subject apparently healthy, but with positive OT, in the same experimental conditions described above, the wave continues its normal course, through the DL, which is followed by the disappearance of the fluctuation. The subsequent oscillation shows a not significant increase in intensity, lasting no more than 7 seconds, revealing the altered composition of the Oncological glycocalyx, according to the pathological behavior of melatonin receptors, M1 and M2 (Table 1).

The following clinical experience, easy to apply, corroborates the above mentioned data very easily, giving the doctor not sufficiently expert in SBQ the opportunity to clinically evaluate the activity of the glycocalyx, monitoring it under treatment.

In healthy, we evaluate the latency time of the SST-RH - gastric aspecific reflex (tissue oxygenation: NN = 8 sec.) and its duration, physiologically more than 3 seconds and less than 4

seconds, corresponding both to the Microcirculatory Functional Reserve and to the fractal dimension, fD (1-10).

The second evaluation of these parameters is carried out "simultaneously" at the beginning of the closed eyes test - stimulation of epiphyseal endogenous melatonin secretion – and allows to observed in healthy individuals, doubling of latency time (NN = 8 seconds) expression of an effective microcirculatory activation, "simultaneous" to the closing of the eyes, referred above.

In contrast, under the same experimental conditions, in subjects with positive OT is not possible to reach an optimal oxygenation of neuronal center for the SST-RH due to the genetic alteration at the basis of OT, of which the suffering of the glycocalyx is the clear testimony.

The correlation between structure and function of the glycocalyx and between physiology and pathology of its cell is interesting to note. If the glycocalyx reacts physiologically to a stimulus it means that the cellular composition which structured it, is immune to caused genetic defects, allowing the physician to exclude damage with genetic origin (1, 2).

Conclusions

In this work is described a very sophisticated QBS method for the assessment of the glycocalyx, which opens new original ways for the research in medicine.
It is interesting to note that the doctor who does not have a secure QBS knowledge, knowing the only auscultatory percussion of the stomach, is able to proceed with the reliable assessment of the glycocalyx using a more simple and practical, but reliable method, reported in the article.

The possibility to assess both the structure and the function of the glycocalyx in any biological system, made clinically possible for the first time by QBS, will be a significant moment for Physiology, Patho-physiology, Pathology and especially for the Clinic one.

After evaluating the diabetic glycocalyx (3-5), whose alteration is typical of the second stage of T2DM, the characteristic alteration of the Oncological glycocalyx is here shown, demonstrating that today we can study important events of cell biology, both in terms physiological and pathological conditions, through the evaluation of the glycocalyx in well defined cells with positive implications for the diagnosis.

The physicians should pay particular attention to the different QBS constitutions with their respective inherited real risks, subject to them, conditio sine qua non of related diseases. These facts represent the initial stage of pathological changes, characterized by functional impairment of the relevant glycocalyx.

Consequently, through QBS method is possible to recognize serious illnesses bedside, even in the initial stage, such as Alzheimer's disease (it will be treated in a future article), when the recourse to the laboratory or to sophisticated semiotics is useless, but the preventive treatment makes possible to achieve the best results.

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