Biophysical-Semeiotic Bed-Side Detecting CAD, even silent, and Coronary Calcification

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ABSTRACT

INTRODUCTION

Biophysical Semeiotics is really useful in order to bed-side recognizing both heart ischaemic disease and CAD "real risk", i.e. before its onset, as well as coronary calcification. In fact, for the first time, this original physical semeiotics allows doctor to evaluate at the bed-side microcirculatory function and structure of coronary blood vessels, including the precious Endoarterial Blocking Devices (DEB). Interestingly, according to my theory of Angiobiopathy [1-3], which completes Tischendorf's Angiobiopathy, it is easy to gather parenchymal data by clinical assessing the related microcirculatory events.

OBJECTIVES

Accordingly patients with CAD and/or coronary calcifications, and particularly those individuals with CAD "real risk", may have no symptoms at all over years or decades, and electrocardiographic features of ischaemia may be induced by exercise without accompanying angina [1]. (CAD, www.semeioticabiofisica.it). In other words, we need a clinical tool reliable in rapid detecting CAD "real risk", CAD, even clinically silent, and CAD calcifications on very large scale, namely on the majority of population.

METHODS AND MATERIALS

With the aid of biophysical semeiotic "Myocardial Ischaemic Preconditioning" [1-3], and the so-called cardio-gastric aspecific "lithiasic" reflex [3], I examined 150 individuals positive for CAD: digital pressure of mean intensity, applied "precisely" upon calcified coronary cutaneous projection area, brings about the gastric aspecific reflex [1-3], which, after reaching its highest value, immediately reduces of 1/3 of intensity: typical lithiasis reflex (e.g., as we observe in case of gall-bladder and/or kidney lithiasis and/or vessel wall, a.s.o.). Interestingly, lithiasis involves exclusively individuals with "variant" metabolic syndrome [3,4,5]. Therefore, coronary calcification are present exclusively in a sub-type of patients involved by CAD: without Metabolic Syndrome "variant form", calcifications are not possible!

In healthy, myocardial-gastric aspecific reflex shows a latency time of 8 sec., duration less than 4 sec., and Myocardial Ischaemic Preconditioning is normal.

In individuals, at very CAD "real risk", (e.g. in which there is a family history of CAD) the above mentioned gastric aspecific reflex presents a latency time either normal or slightly reduced (= 7 sec.), but the duration is 4 sec. or more, indicating a pathological microvessel condition. In these cases preconditioning appears altered: type II since parameter values do not ameliorate (= impaired microcirculatory functional reserve: MFR) [1-3]

On the contrary, in all cases of CAD, even symptomless, latency time is less than 8 sec., reflex duration is more than 4 sec., preconditioning shows the pathological type III.
RESULTS
In all 150 patients with CAD, even asymptomatic, latency time (= myocardial oxygenation), become clearly shorter than that of the pathological basal value, in relation with CAD seriousness. In addition, in 48 cases, I observed lithiasic gastric aspecific reflex, although different in intensity. Diagnosis was subsequently corroborated with sophisticated semeiotics.

In individuals, apparently in health condition, but at CAD "real risk" reflex duration results more or less prolonged and preconditioning of type II.

DISCUSSION
Biophysical-Semeiotic method, easy and rapid to perform, in a 48-year-long clinical experience proved to be really useful and reliable in recognizing on very large scale individuals "healthy" but involved by CAD "real risk", CAD, initial or silent as well as overt, and coronary calcification (= impairment of microcirculatory functional reserve of coronary capillary bed).

CONCLUSION
For the first time clinically, Biophysical Semeiotics allows doctors to recognize clinically patients with risk of CAD [2,3], CAD, even symptomless, and coronary calcification (CAC), years or decades before disorder onset. Coronary artery calcification diagnosis is independent of its size and location, which can be today ascertained by means of EBCT. Interestingly, lithiasis of whatever biological system or tissue involves exclusively individuals with "variant" metabolic syndrome, I described formerly [3,4,5].

BIBLIOGRAPHY:


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Objectives: Accordingly patients with CAD and/or coronary calcifications, may have no symptoms at all over years or decades, and electrocardiographic features of ischaemia may be induced by exercise without accompanying angina [1]. (CAD, www.semeioticaBiofisica.it). In other words, we need a clinical tool reliable in rapid detecting both CAD, even clinically silent, and CAD calcifications.

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