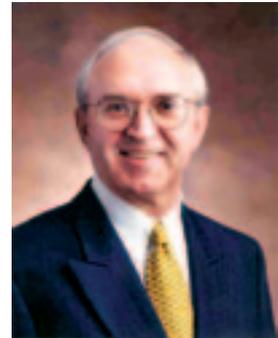


President's Page

Therapy in Cardiovascular Disease: It Is Time for Therapeutic Classification

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During the early decades of the last century, it became obvious that there was a need for nomenclature and diagnostic criteria for cardiovascular diseases. Responding to this need, the New York Heart Association published in 1928 a detailed set of criteria for the classification and diagnosis of heart disease.¹ One of the primary objectives of the book was to provide physicians with the specific criteria for cardiovascular diagnosis. For a complete diagnosis of a particular disease four things should be known: 1) the cause, i.e. the etiologic factor(s); 2) the underlying pathology/histopathology produced by the etiologic factor(s); 3) the pathophysiologic consequences due to the underlying pathology; 4) the symptoms of the patient (functional class) related to the disease.¹ The diagnostic classification had a significant impact on cardiology practice for decades. The thinking physician using this diagnostic classification is constantly aware of the omissions in the diagnosis for the patient he is caring for and of how much more information is needed for a complete diagnosis.²

At the time this classification was introduced, etiologic diagnosis was not available; pathologic diagnosis was provided only at autopsy; pathophysiologic diagnosis was nonexistent; only symptomatic classification (functional class), relatively speaking, was accurate. Today, more than seven decades later, etiologic diagnosis can be accomplished even at a molecular or genetic level; contemporary imaging techniques including molecular imaging provide accurate anatomic diagnosis; pathophysiologic mechanisms – not only hemodynamic but also at the cellular and molecular level – and the limitations of the patient with objective and subjective criteria can be accurately defined (Table 1).

As a general rule, developments in diagnosis come first, while advances in therapy follow. At the time of the introduction of the diagnostic classification, therapy for cardiovascular diseases was almost absent. Today, seven decades later, dramatic progress has been made in the management of cardiovascular diseases. We are, however, far away from definitive treatment. As is the case with diagnosis, for the complete treatment of a disease (i.e. cure), the underlying etiologic factor(s) should be eliminated; the pathologic and pathophysiologic abnormalities should be normalized and, the patient should become asymptomatic. At present, in cardiovascular diseases, etiologic therapy is almost never provided; anatomical correction (exceptions may be the closure of a patent *ductus arterio-*

Table 1. Our ability to define etiology, anatomy and pathophysiology has changed dramatically since 1928. In contrast to the diagnosis, our therapeutic ability is limited, since etiologic and anatomic therapy cannot be provided today.

Diagnostic Classification:

Diagnosis type	1928	2006
Etiologic	No	Yes
Pathologic/histopathologic	No	Yes
Pathophysiologic	No	Yes
Symptomatic (functional class)	Yes	Yes

Therapeutic Classification:

Type of therapy	2006	Future
Etiologic	No	Yes
Pathologic/histopathologic	No	Yes
Pathophysiologic	Yes	Yes
Symptomatic improvement (functional class)	Yes	Yes

sus, the ablation of an accessory atrioventricular pathway, or the closure of a small atrial septal defect) is not available; significant improvement of the underlying pathophysiologic mechanisms is the rule and symptomatic improvement is almost universal.

Despite the great advances in cardiology, although our management is very good, most of the time it is only palliative. Since diagnostic classification in the last century helped clinicians to understand how much they knew, or better, how much they did *not* know about the disease(s) of a particular patient, similarly an establishment of a therapeutic classification will make physicians aware of the limitations in providing definitive therapy

and will help them to better realize that the management which is provided today is palliative. For these reasons I believe that it is time to establish a therapeutic classification for cardiovascular diseases in the same way as a diagnostic classification was established many decades ago.

References

1. Nomenclature and Criteria for Diagnosis of Diseases of the Heart and Great Vessels, 9th Edition. Little, Brown and Company, Boston/New York/Toronto/London, 1994.
2. Boudoulas H. The well-rounded clinician. *Hellenic J Cardiol* 2006; 46: 317.