

SOCIÉTÉ BELGE DE BIOLOGIE CLINIQUE
BELGISCHE VERENIGING VOOR KLINISCHE BIOLOGIE

SOCIÉTÉ BELGE DE CHIMIE CLINIQUE
BELGISCHE VERENIGING VOOR KLINISCHE CHEMIE

Abstracts presented during the National Symposium of the BVKB-SBBC / BVKC-SBCC

October 27th, 2001

Brussels, Belgium

CLINICAL APPLICATIONS OF CARDIAC TROPONIN

Jean-Paul Chapelle

Department of Clinical Chemistry, University Hospital, Sart Tilman,
B - 4000 Liège.

The troponin (Tn) complex consists of three protein subunits referred to as TnT, TnI and TnC. Myocardium contains TnT and TnI isoforms (cTnT and cTnI) which are not present in skeletal muscles and which can be measured by immunological techniques without interference of the muscular isoforms. After acute myocardial infarction, cTnT and cTnI concentrations start to increase in serum in a rather similar way than CK-MB, but return to normal after longer periods of time, extending the diagnostic window. Because of their excellent cardiac specificity, cTnT and cTnI appear ideally suited for the differential diagnosis of myocardial and muscular damage, for example in non cardiac surgery patients, in patients with muscular trauma or with chronic muscular diseases, or after intensive physical exercise. The improved specificity as compared to CK-MB is coupled with improved sensitivity. Consequently, cTnT and cTnI may also be used for detecting even microscopic zones of myocardial necrosis, and therefore have found new applications in the management of patients with unstable angina.

For these reasons, and in spite of some drawbacks (possible reexpression of cTnT in skeletal muscles, lack of standardization of cTnI assays), troponin should be the preferred marker for diagnostic use.