CLINICAL AND ECHOCARDIOGRAPHIC DATA PREDICT DIAGNOSIS IN PATIENT YOUNGER THAN 40 YEARS ADMITTED FOR CHEST PAIN AND ELEVATED TROPONIN I LEVELS

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Introduction
Cardiac specific troponin I (TnI) provides useful rapid diagnostic and prognostic information for patients with chest pain presumed to be ischemic in origin. However, elevated TnI levels and ST-segment modification on electrocardiogram can be found in conditions other than acute coronary syndrome (ACS), especially myopericarditis (MP) in young patients. The purpose of the study was to prospectively evaluated simple combined criteria to rule out ACS, in patients younger than 40 years admitted for chest pain and elevated TnI levels, and therefore to avoid unnecessary invasive coronary angiography.

Methods
Sixty-nine consecutive patients younger than 40 years (62 males), were referred to our department and included in our database. On admission, 35 baseline clinical, biological, electrocardiographic and echocardiographic variables were compared to possibly discriminate ACS from MP. Coronary angiography was performed in 87% of the cases.

Results
Forty-nine patients with ACS were included and 20 were considered as MP (29%). Patients with ACS were older (38±3 vs 33±5 years, p<0.001), with more risk factors (smoking, hypercholesterolemia, hypertension, and family history). History of a recent flu like syndrome (68% vs 0%), atypical (80% vs 19%) and breath-influenced (45% vs 2%) chest pain were more frequently (all p<0.001) found in the group of MP patients. Troponin and CK levels were not different in the 2 groups, in comparison of CRP levels higher in the group of MP patients (5.2±5.0 vs 1.8±0.7 ng/mL, p=0.03). At echocardiography, no abnormal segment contraction (67% vs 37%, p<0.05) and pericardial effusion (17% vs 0%, p<0.001) were found to be in favour of the diagnosis of MP. Five baseline variables (≤3 coronary risk factors, flulike syndrome, breath-influenced chest pain, pericardial effusion and no abnormal segment contraction at echocardiography) with the strongest prognostic performance, constituted a simple data score to discriminate ACS from MP. The presence of ≥3 criteria gives 100% specificity and 59% sensitivity, and the presence of ≥2 criteria gives 86% specificity and 94% sensitivity.

Conclusion
Simple data predict diagnosis of ACS in patients younger than 40 years admitted for chest pain and elevated troponin I levels. A five variables score is found to be clinically useful in the triage of such patients and allow avoiding immediate unnecessary transfer for invasive coronary angiography.

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BILATERAL EARLOBE CREASES ARE ASSOCIATED WITH ABDOMINAL OBESITY

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Introduction :
Several studies suggest that diagonal earlobe creases
(ELC) are associated with coronary heart disease. However, whether ELC are associated with cardiovascular risk factors is largely unknown.

Methods :
We compared 100 hospitalized patients with bilateral ELC with 100 patients without ELC matched for age, gender and ward.

Results :
Patients with ELC (mean age 71 years, 64 % males) had a higher prevalence of traditional cardiovascular risk factors (obesity, arterial hypertension, diabetes mellitus, hypercholesterolemia). Multivariable logistic regression showed that ELC was associated with obesity (body mass index above 30 kg/m², odds ratio 1.69, P = 0.0001) and increased waist-to-hip ratio (above 1 in men and 0.95 in women, odds ratio 5.79, P = 0.004).

Conclusion :
This case-control study suggests an association between bilateral ELC and abdominal obesity, which is an important component of the metabolic syndrome. This observation is in accordance with recent findings showing that abdominal obesity, rather than body mass index, increases cardiovascular risk.

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CARDIAC SPECIFIC TROPONIN I LEVELS TO PREDICT THE DIAGNOSIS IN PATIENTS WITH DYSPNEA NYPHA III-IV OF UNKNOWN ORIGIN ADMITTED IN THE EMERGENCY ROOM

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Introduction
Cardiac specific troponin I (TnI) provides useful diagnostic and prognostic information for patients with chest pain suspected of ischemic origin. However, acute coronary syndrome (ACS) may present clinically by symptoms of acute left ventricular failure instead of chest pain. The purpose of our study is to test the hypothesis that measurement of TnI levels in patients with acute dyspnea of unknown origin can be useful to diagnose ACS and to improve patient care.

Method
We enrolled 61 consecutive patients presenting dyspnea NYHA III-IV of unknown origin in the emergency room between November 2002 and May 2003. In these patients, the first clinical assessment, 12-lead electrocardiogram and chest X-ray did not allow definite diagnosis. Patients with chest pain or evident diagnosis of pulmonary infection or embolism were excluded. Circulating levels of TnI were measured on admission and after 6 hours and were compared between the different groups of patients labelled by their definite diagnosis concluded at the end of their hospitalisation.

Results
The medium age of the patients was 68.0 ± 7.2 years and 55% were men. The diagnostic categories chosen after several cardiac investigation were ACS (n=8), including 6 patients with diabetes mellitus, pulmonary embolism (PE)(n=12), acute cardiac heart failure (CHF)(n=16) and lung pathology, including asthma or infection (n=25). All patients suffering from ACS had high levels of TnI>10 ULN (upper limit of normal) (sensitivity 32%, specificity 100%). A slight increase of TnI (2-5 ULN) did not allow to differentiate PE from CHF (p=0.7), but well from lung disease (p=0.02). Although a large majority (76%) of patients with lung disease had normal level of TnI, levels >5 ULN were associated with a worse prognosis; the 2 patients died during their hospitalisation.

Conclusion
These results suggest that cardiac specific TnI might be useful to differentiate patients presenting dyspnea NYHA III-IV in the setting of ACS. Dosage combination of TnI and BNP will probably provide more information of prognosis in this population.

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IMPORTANCE OF THE CHOICE OF REGION OF INTEREST (ROI) TO DETERMINE THE VASCULAR PHASE OF REFLEX SYMPATHETIC DYSTROPHY (RSD)

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Aim:
Clinical diagnosis of RSD remains difficult. Bone scan helps to confirm diagnosis. However, a vascular phase is mandatory to determine the stage of RSD, which is of importance to optimize the treatment. We investigate to what extent the choice of a more or less distal ROI could better reflect vascularity of the affected limb.Methods: 154 pts. with a clinical suspicion of RSD after stroke (gr.1) and 266 pts with suspected RSD after a trauma (gr. 2) were selected. A bone scan (IV: 740MBq of 99mTc HDP) compared the uptake by carpus/tarsus and MCP/MTP joints of affected limb to that of unaffected limb. It was followed by a dynamic vascular phase (IV: 4 mg cold PPi, followed by 740 MBq of 99mTcO4-). 2 ROI's were selected: distal third of the affected limb (A) and an ultra distal ROI (B). Vascular activity between 60" and 120" was recorded and a ratio affected/unaffected limb activity was calculated for both ROI'S (A and B).Results: a strong correlation existed at bone scan between the ratio's (affected/unaffected limb) of carpus/tarsus values (x) and MCP/MTP joints values (y): gr 1: y=0.61x+0.53 (r=0.72, p<0.001) and gr.2: y=0.42x+0.68 (r=0.7, p<0.001). For gr.1, no correlation was found between x or y and A (r=0.1, p<0.18 n.s.). A faint correlation existed between x and y and A for gr.2 (r=0.23, p<0.05). A significant correlation existed between x and y and B for the 2 groups (gr.1: r=0.56, p<0.001, gr.2: r=0.61, p<0.001). Paired Student's t test showed a significant difference between A and B for the 2 groups (gr. 1: A: mean+/- SD: 1,0 +/-0.29 , B:1.14 +/-0.27, t=-5.6, p<0.001; gr. 2: A: 1.07+/-0.22, B: 1.22+/-0.28, t=-8.7, p<0.001). For patients with the highest values of x and y, a more significant difference was found between A and B (gr. 1 (74 pts.): A: 1.02 +/- 0.28, B: 1.26 +/- 0.28, t=-7.2, p< 0.001; gr. 2 (106 pts.): A: 1.13 +/- 0.23, B: 1.41 +/- 0.28, t=-10.51, p<0.001).

Conclusions:
We show the importance of the choice of vascular ROI to determine the stage of RSD. Only an ultra distal zone correctly reflects the vascular stage, which is of importance to correctly manage the treatment. Finally, though a relationship exists between static indexes and vascular ultradistal phase, this is not close enough to allow the use of static indexes to predict individually the stage of disease.

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