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2:30

PROGRESS IN BLOOD LIPID REPORTING PRACTICES IN NORTH AMERICA: CHANGES FROM 1985 TO 1990

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In an attempt to assess the impact of the National Cholesterol Education Panel's (NCEP) recommendations and in follow-up to a 1985 survey of 157 academic clinical laboratories (L) in North America, the same L were re-surveyed regarding current blood lipid reporting practices. There was a marked downward shift in normative ranges for total serum cholesterol (TC) used by L. In 1985 100% of the surveyed laboratories reported a value of >201 mg/dl as normal or desirable, and 76% reported similar acceptability of values >240 mg/dl, while in 1990 only 29% and 11%, respectively, reported such values as desirable. Of the L responding to both surveys, 90% lowered their reported normative values, with 48% and 8% lowering their ranges by >50 mg/dl and >100 mg/dl, respectively. Changes in the sources of normative ranges were also noted. In 1985, 50% of ranges were from published sources, 9% from manufacturers, and 42% from local populations. In 1990, 24% of ranges came from published sources 3% from manufacturers, 13% from local populations, and 57% from the NCEP. The percent of L using reference ranges based on age and sex fell from 52% to 21% and from 31% to 10%, respectively. The number of L designating patient risk for coronary heart disease rose from 31% to 72%. Currently, 62% of the L designating risk use the NCEP guidelines for TC. Other risk designations, including high density lipoprotein (HDL)-C, TC/HDL-C ratio, and apolipoproteins changed only modestly. The current reporting patterns reflect simplified reporting practices for blood lipids. Although definite progress has been made, clinical laboratories remain a substantial distance from the NCEP goal of uniformly standardized blood lipid reporting practices.

3:00

APOLIPOPROTEINS A-I AND B-100 BETTER THAN STANDARD LIPID MEASUREMENTS IN DIFFERENTIATING BETWEEN PATIENTS WITH POSITIVE OR NEGATIVE CORONARY ANGIOGRAPHY?

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Low levels of apolipoprotein A-I (Apo A-I) and high levels of apolipoproteins B-100 (Apo B) have been associated with coronary artery disease (CAD). We studied 166 pts to determine whether Apo A-I and Apo B add discriminating value to standard lipid measurements in predicting the presence of CAD. CAD was defined as greater than 50% luminal narrowing on angioplasty and was observed in 84 pts (64 male (M), 20 female (F)). Coronary disease was considered absent in 82 pts (38 M, 44 F) who had no luminal stenosis.

Univariate values

*Age	0.0004	TC/HDL	0.0001
*Male	0.0000	LDL/HDL	0.0001
T. Chol	0.003	Apo A-I	0.89
Trigly	0.63	Apo B	0.0002
*LDL	0.0000	A-I/B ratio	0.0025
HDL	0.0007	*Smoking	0.019

*Also significant by multivariate analysis

In the subset of 58 pts with CAD and normal cholesterol (<200 mg/dl) and LDL (<130 mg/dl), Apo B and Apo A-I/Apo B ratio did not improve discriminating power over LDL/HDL ratio.

Conclusions: Measurement of apoproteins A-I and B does not improve the discriminating power of the commonly measured lipid parameters in predicting CAD in pts with elevated or normal cholesterol and LDL. These data do not support routine use of apoproteins in cardiac risk factor assessment.

2:45

RACIAL DIFFERENCES IN SERUM Lp(a) DISTRIBUTION AND ITS RELATION TO PARENTAL MYOCARDIAL INFARCTION AMONG CHILDREN. THE BOGALUSA HEART STUDY

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The value of Lp(a) in the prediction of CAD risk very early in life remains to be established in different racial groups. Therefore, serum Lp(a) distribution and its relation to parental histories of myocardial infarction (MI) were examined in 2,438 children (8 to 17 years of age) from a total biracial community. Parental myocardial infarction was used as a surrogate measure of future risk of disease in the offspring. Lp(a) levels averaged 1.7-fold higher in blacks than in whites ($p<0.0001$). A small but significant gender difference (females > males, $p < 0.05$) was seen in both races. Race, sexual maturation, and gender accounted for 9.4% of the variability of Lp(a) in serum. White children with parental MI (n=90) had increased levels of Lp(a) compared with those without parental MI (22.4 mg/dl vs 17.1 mg/dl, $p<0.01$). Further, among white children, the prevalence of parental MI was higher in those with Lp(a) levels above 25 mg/dl than in those with values at or below 25 mg/dl (9.5% vs 5.4%, $p<0.01$). In contrast, the relation of Lp(a) to parental MI was not seen in black children. No associations were observed between parental MI and serum levels of any of the lipids or lipoprotein cholesterol classes in children of both races. Serum Lp(a) levels may prove valuable in the assessment of CAD risk early in life among white populations. These findings also emphasize the need to evaluate the atherogenic potential of Lp(a) in different racial groups.

3:15

Influence of the Selection of Angiographic Projections on the Outcome of Coronary Angiographic Follow-up Trials - Results from INTACT

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In a prospective angiographic follow-up trial (INTACT) including 348 patients with coronary artery disease standardized coronary angiograms taken in multiple projections were repeated after an interval of three years. The angiograms were analyzed with a computer-assisted contour detection system (CAAS). A total of 1063 coronary stenoses (ST), defined as diameter reduction ≥20% were compared between both angiograms. ST progression (PRO) and regression (RE) were defined as increase and decrease, respectively, of percent diameter ST by ≥20%. The table presents the total number of ST with PRO and RE considering either the mean change of percent diameter stenosis over all projections analyzed per patient (A), or only the respective projections indicating the individual maximal PRO (B) or maximal RE (C).

	A	B	C
ST with PRO	120(11%)	203(19%)	71(7%)*
ST with RE	45(4%)	37(4%)	80(8%)*

*$p<0.001$

The marked differences between the results yielded with analysis patterns A, B, and C demonstrate that selection of projections substantially influences the results. Thus, availability of a considerable number of different angiographic projections is mandatory in such trials.