LETTER TO EDITOR

Re: Lipoprotein(a) and SYNTAX Score Association with Severity of Coronary Artery Atherosclerosis in North India

رد: البروتين الدهني (أ) ومقياس SYNTAX و ارتباطه مع شدة تصلب الشريان التاجي في شمال الهند

Sir,

Ashfaq *et al*.[1] reported a significant correlation between circulating lipoprotein(a) [Lp(a)] levels and the severity of coronary atherosclerosis (as assessed by the SYNTAX score) in a North Indian population. The authors suggested that Lp(a) levels of >20 mg/dl predict the severity of coronary atherosclerosis. A few additional comments may be of interest to readers.

Studies have found a positive correlation between Lp(a) and total cholesterol or low-density lipoprotein cholesterol (LDL-C) levels but an inverse association with triglyceride (TG) levels in patients with diabetes mellitus (DM).[2] Ashfaq *et al*.[1] did not discuss the relationship between LDL-C and Lp(a). In addition, the authors showed that Lp(a) levels tended to be higher at raised TG levels.[1] It would be useful to know how many patients in this study had DM.

Ashfaq *et al*.[1] did not include the details of the kit used for the Lp(a) measurement and the precision data at the different Lp(a) levels. The problems with isoform specificity in Lp(a) measurements, the sub-optimal performance of the different assays and the lack of commutability across Lp(a) assay systems are well-known.[3]

Population studies show that females after the age of 45 years tend to have higher Lp(a) values than men of the same age.[4] Also, hormone replacement therapy can reduce the plasma concentration of Lp(a).[5] The authors did not describe the effect of gender on Lp(a) nor show the numbers of females in the two groups and whether some of these women were on HRT. If there were more women in one group than the other, this may have influenced the distribution of Lp(a) concentrations.

Lp(a) values are known not to be normally distributed.[6] Therefore, the preferred statistical evaluation is to use non-parametric tests and the data should be expressed in medians and ranges. In addition, the cut-off value (>20 mg/dl) proposed by Ashfaq *et al*.[1] could be influenced by the use of the mean ± standard deviation.

By using a receiver operating characteristic curve analysis and calculating the area under the curve, the accuracy of a diagnostic test can be determined and used to predict the best cut-off value by showing the sensitivity and specificity of the test at a certain cut-off point. In our opinion, it would be interesting to carry out such a procedure for this particular study and to see the results.

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