Abstract

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Lp(a) lipoprotein in cardiovascular disease.

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BACKGROUND: The article summarizes the increased knowledge about the enigmatic Lp(a) lipoprotein and its clinical importance over the past 20 years. The mode of inheritance, the unique features of Lp(a) composition and structure and the unusual distribution of the mainly genetically determined plasma Lp(a) levels are discussed.

CONCLUSIONS: The main factors that can significantly change the inherited plasma Lp(a) levels are endocrine disorders and hormone treatment. It seems possible that sex hormones protect females to a large extent from the potentially deleterious effects of inherited high Lp(a) levels until menopause. The exceptionally strong independent association found in most studies between Lp(a) lipoprotein levels and atherosclerotic disorders indicates that Lp(a) is a factor of outstanding importance in the pathogenesis of atherosclerosis. Probable pathogenetic mechanisms are reviewed. The associations found between LP(a) and insulin release, rheumatoid arthritis and renal diseases suggest that Lp(a) may be involved in immunological mechanisms. In a new hypothesis it is suggested that an autoimmune process might especially occur in individuals with inherited high Lp(a) levels and certain HLA class II genotypes, triggered by a concurrent infection.

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