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Higher Prevalence of Cardiovascular Disease and poor Metabolic control in Patients with type 1 Diabetes.

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Case Study: cardiovascular risk factor that has been shown to correlate to cardiovascular disease and aortic valve disease. Plasma levels has a skewed distribution, is highly influenced by genetic inheritance and is not considered to be affected by age, sex or lifestyle. Its importance for the development of vascular complications in patients with type 1 diabetes is unknown.

Methods:-We included 715 consecutive type 1 diabetes patients receiving regular care at our out-patient clinic, department of into an observational cross sectional registry study. Patient characteristics, cardiovascular history and measurement was extracted from their electronic medical charts. Patients were divided into four groups according to their Lp(a) levels in nmol/L (Very Low <10; Low 10–30; Intermediate 30–120; High >120) and statistical analysis was performed comparing the prevalence of mikro- and makrovascular complications between the groups. The relationship between Lp(a) and diabetes control measured as HbA1c (mmol/mol) was studied by comparing the subgroups with good (<52), average (52–70) and poor (>70) metabolic control.

Results:-The duration in cohort was 49.9 (15.8) years and 26.7 (15.5) years, respectively, and the Lp(a) median (inter quartile range) was 20.4 (7.8–75.1) nmol/L. Patients in the high Lp(a) group had significantly higher prevalence of cardiovascular and microvascular complications compared to patients with very low levels. Significantly higher Lp(a) levels were observed in patients with poor and average metabolic control compared to patients with good control ($p<0.05$). The 80:th percentile of Lp(a) was 78.6 nmol/L, 105.2 nmol/L and 100.6 nmol/L for good, average and poor metabolic control respectively

Conclusion : : significant risk factor for cardiovascular complications and aortic valve disease in patients with type 1 diabetes. Poor metabolic control of the diabetes disease is associated to high levels.