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Dyslipidemia and Statin use in diabetec patients with chronic kidney disease (TUNCKDD Survey)

Mayssa Hadj Brahim[1], Sahar Agerbi[2], Mami Ikram[3], Chargui Soumaya[2], Badreddine Ben Kaab[4], Azzabi Awatef[5], Mouna Hamouda[6], Azaeiz Saifeddine[7], Rais Lamia[3], Harzallah Amel[2], Jannet Labidi[8]

[1]Taher Sfar University Hospital , Mahdia, Mahdia, Tunisia, *[2]Charles Nicolle Hospital of Tunis, Tunis, Tunisia*, *[3]La Rabta Hospital of Tunis, Tunis, Tunisia*, *[4]Internal Security Force Hospital of La Marsa, Tunis, Tunisia*, *[5]Sahloul Hospital of Sousse, Sousse, Tunisia*, *[6]Fattouma Bourguiba Hospital of Monastir, Monastir, Tunisia*, *[7]Private Sector, Ben Arous, Tunis, Tunisia*, *[8]Military Hospital of Instruction of Tunis, Tunis, Tunisia*

Background and Aims:

Diabetes is a leading cause of chronic kidney disease (CKD) and end-stage renal disease globally. The coexistence of CKD and diabetes is associated with an increased risk of cardiovascular disease . Additionally, dyslipidemia is prevalent among these patients, further exacerbating their cardiovascular risk. This study aims to evaluate lipid abnormalities and the patterns of statin prescription among diabetic patients with and without kidney involvement.

Method:

This observational, multicenter, cross-sectional study included all diabetic patients with a minimum of three months of follow-up prior to the inclusion date, conducted between January 9, 2023, and February 8, 2023.

Results:

We recruited a total of 10,145 diabetic patients, of whom 3,929 (38.7%) had chronic kidney disease (CKD) and 6,216 (61.3%) did not. The mean age was 67.5 ± 11.3 years in Group I (CKD) and 59.9 ± 13.1 years in Group II (non-CKD). The median levels (in mg/dL) of total cholesterol (TC), triglycerides (TG), low-density lipoprotein (LDL), and high-density lipoprotein (HDL) in each group were as follows: TC (1.69(Group I) vs 1.72(GroupII), $p = 0.018$), TG (1.38 vs 1.19, $p = 0.101$), LDL (0.92 vs 0.97, $p = 0.188$), and HDL (0.43 vs 0.46, $p = 0.741$).
Dyslipidemia was more prevalent in the CKD group (48.2% vs 45.4%, $p = 0.007$), and statins were more frequently prescribed to patients with CKD (67.8% vs 54.5%, $p < 0.001$).
Dyslipidemic patients with CKD exhibited a higher prevalence of comorbidities, including hypertension (87.0% vs 66.1%), stroke (10.3% vs 5.8%), and coronary artery disease (26.5% vs 16.3%) ($p < 0.001$). Furthermore, dyslipidemic patients with CKD had a longer duration of diabetes (15 vs 10 years, $p < 0.001$) and a higher median triglyceride level (1.51 vs 1.29, $p < 0.001$), despite having a more balanced HbA1c level (8.38 ± 1.79 vs 8.50 ± 1.91, $p = 0.031$).

Conclusion:

Dyslipidemia is a potentially modifiable cardiovascular risk factor, yet its management in patients with CKD is obviously challenging.