Patterns of statins prescription, and goals attainments in a sample of lebanese patients: a retrospective study

Background: The linear relationship between low density lipoprotein levels and coronary heart disease events has been well established. Both European and American data showed that low density lipoprotein levels is poorly controlled among the statin treated patients. In Lebanon, there is no national guidelines for the management of hypercholesterolemia. There is also little information about patients profiles, treatment patterns, cost of therapy and goals attainment among the statin treated patients. 

Objective: The primary objective of this study was to assess goals attainment, under the current patterns of statin prescription. The secondary objectives were to assess efficacy and safety of prescribed statins in the clinical practice, and to estimate the average monthly cost of statin therapy.

Methods: A retrospective chart review was performed on 240 patients files obtained from four Lebanese doctors of three different specialties who are common statin prescribers. Patients included in this study were 18 years and above with a diagnosis of dyslipidemia and who had been on stains for at least eight weeks at the time of the observation. Patients on statin therapy were evaluated to determine their coronary heart disease risk. Goals attainments, patterns of statin prescription, efficacy and safety of the prescribed statins and the cost of the statin therapy.

Results: Seventy Six Percent of the statin treated patients were high coronary heart disease risk according to the Adult Treatment Panel III guidelines, 45% had established coronary heart disease, 50% had diabetes, 38% had hypertension and 44.5% had low high density lipoprotein levels. The study showed that before initiating therapy 88% of the patients and 28% had elevated low density lipoprotein and Non-high density lipoprotein levels respectively. An initial average low density lipoprotein decrease of 28% is required in patients to attain the set goals with greater than 50% decrease required in 25% of the patients, the majority being of the high risk. In addition, results indicate that respectively 65% and 24% of the patients were still not at the recommended low density lipoprotein and Non-high density lipoprotein goals even after statin therapy. The additional reduction required to achieve low density lipoprotein goals is 22% with 47% of the patients requiring at least 20% reduction. The most prescribed statins were atorvastatin 10 & 20mg, simavstatin 10, 20& 40mg and rosuvastatin 10mg. Moreover, a comparable decrease in low density lipoprotein was noted
between the equipotent doses, yet was lower than those reported in the literature. Statins were very well tolerated and the average estimated monthly cost was $40 assuming full adherence to the drug. Conclusion and Recommendations: Based on this study, the results highlighted that goal attainment was not achieved in the majority of the patients despite statin therapy, and that the observed low density lipoprotein lowering effects of the statins were lower than those reported in the literature. These findings should be confirmed by more clinical assessment. It is therefore recommended to implement strategies in order to promote goals achievement. This is achieved by increasing the awareness on the role of cholesterol in CV disease by promoting more aggressive management of dyslipidemia through launching a national day for cholesterol screening in the general population, by setting national guidelines for cholesterol management that are adjusted to the particular nature of the Lebanese patients. In addition further studies are recommended on a greater number of the Lebanese population, in different areas in Lebanon.