Title: Serum interleukin 18 as a predictor of cardiovascular complications development in patients with diabetic nephropathy

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I. Abstract Body (up to 250 words)

Aim: To evaluate the effectiveness of serum interleukin-18 (IL-18) levels as a predictive marker for cardiovascular complications in patients with diabetic nephropathy
Method: We included 40 patients with diabetic nephropathy and exclude patients with previous history of cardiovascular disease, cerebrovascular disease, any sign of infection, and pulmonary disease. We measured IL-18 2 times, one at baseline and one time after 2 years of follow-up. We also run a transthoracic echocardiography 2 times at baseline and after 2 years of follow-up.
Results: The mean baseline interleukin 18 level was 162 pg/ml with SD 12.45 pg/ml which was significantly above the normal level. The mean of baseline ejection fraction was 52% with SD 10. During the 2 years follow-up, 8 cases of acute coronary syndrome were reported. The mean IL-18 level in the patients that developed ACS was 192 pg/ml while in non-ACS patients, the secondary interleukin 18 mean was 171 pg/ml (P<00.1). After a 2 year follow-up, we performed echocardiography in all patients and we found that there is a reverse relationship between ejection fraction and interleukin 18 levels (EF>50% and mean IL-18 of 165, EF 40-50% and mean IL-18 of 171, EF<40% and mean IL-18>180, P<0.05).
Conclusion:There is a strong association between diabetic nephropathy and death from cardiovascular disease. Both diabetes and nephropathy predispose patients for cardiovascular disease. Studies have shown that patients with diabetic nephropathy should be managed more rigorously for cardiovascular risk factor modification. Finding a reliable marker that can predict the risk of cardiovascular disease in patients can help with better management and early angiography if needed. Interleukin 18 levels may be considered as a predictor of heart failure and acute coronary syndrome in diabetics.

II. Reference:

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III. Biography:

Dr. Mahshid Mit has completed her M.D. at the age of 25 years from Shahid Beheshti University of Medical Science, Iran and currently is a postdoctoral fellowship at Harvard Medical School. She is the Director of Remote contributor team at PERFUSE study group at BIDMC hospital and is running clinical trials under the supervision of C. Michael Gibson at Baim institute which is a scientific research institute. She has published and reviewed many papers in reputed journals. She is a journalist at a cardiology news site. She has been serving as an associated editor in chief of WikiDoc, a live free medical textbook.

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