Aim: Although the number of alternative treatment methods introduced for bipolar disorder has increased recently, the Lithium treatment remains as one of the mostly used methods. It has been noted that Li may damage to kidney in several ways from mild damages to established kidney failure. For this reason, it has been recommended that patients who are treated with Li must be observed regularly and it is crucial to detect and prevent any major damage to the patient. In this study it has been aimed to measure the Li influence on glomerular functions of kidneys depending on the time when the subjects are treated.

Methods: There are 49 patients consisting of 19 (38.7%) male and 30 (61.3%) female with the mean age 41.16 ±13.6 and they are chosen from patients who are diagnosed to have bipolar disorder and who have been treated with Li in Suleyman Demirel University Faculty of Medicine Department of Psychiatry. In addition to them, 5 (31.5%) male and 11 (68.5%) female subjects have been incorporated as the control group who are healthy and not treated with Li. The Li treated patients are divided into 3 groups [grup I: 1 to 12 months, grup II: 1 to 5 years and grup III: more than 5 years of Li treatment] depending on the time of Li treatment and in order to measure the GFR of subjects, Tc-99m DTPA and double blood sampling methods have been applied. The Kruskal-Wallis test has been used to compare the data of the treatment groups to the control group. Results: The GFR means have been calculated for each group. Although it has been observed that the GFR means of experimental groups are lower than GFR means of control group especially group III; a significant correlation among groups could not found out statistically. (X²K-W: 2.181 SD: 3 p: 0.536).

Conclusions: It has been concluded that Li does not create a significant effect on glomerular kidney functions clinically; therefore, double blood sampling method can be safely used on patients who are treated with Lithium.