Object: Tics are involuntary, sudden, rapid, recurrent, stereotyped motor movements or phonic productions that involve discrete muscle groups. Pharmacological treatment was considered as the most effective approach for tics management for many years. In recent period clinicians attempt to use behavioral methods for this purpose. The aim of our study was to use non pharmacological treatment like EEG biofeedback-neurofeedback (NF) for the treatment of tics.

Methods We have examined previously non treated 15 children (9 boys and 6 girls) with simple tics (average age 10 years). All children with complex tics and with other comorbidities were excluded from the study. Tics frequency and severity were assessed by Yale Global Tic Severity Scale (YGTSS). Sensorimotor rhythm (SMR) training was used for NF therapy. 30 session of NF with duration of 30 minutes of each was conducted in every patient. Data were analyzed by SPSS 10.0. ANOVA was used to determine the effect of treatment on YGTSS parameters.

Results The ANOVA showed a significant effect of treatment on YGTSS measures (F(1,37)=223.69, MSE=114.735, p<.0001). These evidences suggest that NF significantly improves the severity and frequency of tics.

Conclusions Thus effectiveness of SMR training in children with tics is important as the drugs used for the treatment have severe side effects, compliance problems and etc. Cognitive behavioral therapy is effective not only for reducing of tics but also for increasing self esteem and social competence as well.