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Meta-Analysis of Quality of Life Constructs in Antihypertansive Drug Theraphies

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Abstract: Objectives : It is usually accepted that some of the treatments affect not only the survival times but as well the quality of life of patients. The aim of study is to reach more reliable conclusions by using the meta-analysis method on published studies which deal with the effects of antihypertansive theraphies on the quality of life of patients. Material and Methods : Meta-analysis is used to combine the results of different experiments or studies examining the same question. Meta-analysis is a systematic reviewing strategy for adressing research question that is especially useful when results from several studies disagree with regard to magnitude or direction of the effect, when sample sizes are small to detect an effect and label it statistically significant, or when a large trial is too costly and time consuming to perform. The effect size, d, is the difference between the means in standard score form ,i.e., the ratio of the difference between the means to the standard deviation. Results : When quality of life is considered meta-analysis results showed, except sexual function, positive effect sizes for sleep, general well-being and psychomotor scores (ave(d)=-0.03; ave (d)=0.11; ave (d)=0.135; ave (d) =0.40 Standard Deviations, respectively). When the effect of drug grups on the recovery of patients are studied ave (d) is found to be 0.17 for ACEI ($p>0.05$) and 0.20 SD ($p>0.05$) for BETA. When the effect of ACEI drug group on psychomotor scores of patients is considered, Meta-analysis results yielded a mean effect size of 0.50 SD ($p<0.01$). The mean effect size was 0.40 SD for BETA drug group ($p<0.01$). The effect of BETA drug group on sexual function scores was the smallest effect (ave (d)=-0.103; $p>0.05$). Conclusions : Among all of the applied meta-analysis, none of the drug groups showed negative effects. Meta-analysis results when quality of life is considered showed, except sexual function positive effect sizes for sleep, general well-being and psychomotor scores (ave (d)=-0.03; ave (d)=0.11; ave (d)=0.135; ave (d)=0.40 Standard Deviation, respectively). Different drug groups have different effect sizes on the dimensions of quality of life of patients. Therefore, as well as this study, all other studies in this field meta-analysis which use , will help researchers to choose the best strategy on deciding the type of the drug.

Key Words: Meta-analysis, Antihypertansive Drug Therapy , Hypertension, Quality of life, Clinical Trials

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