

Implantable cardioverter-defibrillator therapies are associated with increased incidence of depression and mortality

Dear Editor,

We read the article about an association between depression and all-cause mortality in patients with congestive heart failure and cardiac devices published by Pushkarev et al.^[1] with great interest. Patient groups with and without depression had similar baseline characteristics in the study and it was reported that depression was associated with all-cause mortality in patients with cardiac implantable electronic devices (CIED) implanted due to heart failure.

It has been shown in many studies that implantable cardioverter-defibrillator (ICD) therapies (anti-tachycardia pacing and shock) increase mortality rates in patients with CIED implanted for both primary and secondary prophylaxis. Bazoukis et al.^[2] reported that ICD therapies led to a significant increase in all-cause mortality rates in patients with heart failure. ICD shocks are a painful therapy, and as Seligman et al.^[3] demonstrated in dogs, unavoidable painful stimulus can lead to “learned helplessness” in patients. It can cause behavioral changes, which may then provoke anxiety disorders and depression. In addition, aside from the presence of ICD therapies, the frequency of these therapies has also been related with increased rates of anxiety disorders and depression in patients with CIED.^[4]

Authors reply

Dear Editor,

Indeed, according to the data of Bazoukis G. et al.,^[1] heart failure patients with reduced ejection fraction had a higher risk of death after implantable cardioverter-defibrillator (ICD) implantation. However, as we indicated in our article,^[2] the type of implantable device was included in the Cox proportional hazards regression model. According to Table 5, if only an ICD was implanted and the patient was not a candidate for cardiac resynchronization therapy (CRT), the hazard

To conclude, we think that as an important determinant of mortality and psychiatric disorders, it would be better if ICD therapies had been evaluated in the study population.

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doi: 10.5543/tkda.2018.01361

Conflict of interest: None declared.



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ratio (HR) of death in this case was 0.28 (95% confidence interval: 0.09–0.83; p=0.022). Also, our data indicated no difference in the prevalence of depression in patients depending on the type of implantable device (Table 1; p=0.610).

An additional multivariate analysis of Cox regression showed that the HR for death in patients with CRT was 4 times higher than in patients who received an ICD only and 3.7 times higher in patients with combined devices (CRT+ICD). Actually, the highest mortality among patients was observed in CRT and CRT+ICD groups (21.1% and 21.0%, respectively), the lowest incidence of death was detected in the group of pa-

tients who received an ICD only (3.9%; all $p < 0.05$). Other authors have presented similar data.^[3,4] Comparison of these groups according to clinical and instrumental characteristics revealed that patients with CRT and combined devices (CRT+ICD) had a more severe course of CHF, which, in our opinion, resulted in higher mortality in these groups.

We did not consider it reasonable to separately evaluate the groups of patients who received a combined CRT+ICD device or only ICD, since there were not enough deaths in each group during the prospective observation time to conduct a full analysis. In addition, the main focus of our study was to evaluate the effect of depression on the risk of death in patients with congestive health failure after CRT, as the least studied group of patients.

At the same time, the idea of the effect of treatment with shocks in patients with an ICD on the incidence of depression and the risk of death^[1,5] seems very interesting and will serve as a working hypothesis for our further research.

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Miyokart enerji tüketimi kardiyak sendrom X'te farklı mı?

Sayın Editör,

Derginizin Ekim 2018 tarihli 6. sayısında, Çetin ve ark.nın “Kardiyak sendrom X’li hastalarda artmış miyokart enerji tüketimi: Çok iş, çok ağrı”^[1] başlıklı makaleleri yer almaktadır. Çetin ve ark. kardiyak sendrom X’li hastalarda miyokardın enerji tüketimini transtorasik ekokardiyografi ile değerlendirmişler, egzersiz EKG testi parametreleri ile ilişkisini incelemişlerdir. Miyokart enerji tüketiminin kontrol grubuna göre artmış olduğu ve kardiyak sendrom X için bağımsız bir öngördürücü olduğu sonucuna varmışlardır.

Çalışmanın kurgusu, veri toplama ve analizi, istatistik değerlendirilmesine bakıldığında birkaç yöntem ile sonuçlar doğrulanarak emek verilmiş bir çalışma

olduğu aşıkardır. Ancak tartışma kısmında bahsedilen birkaç noktaya dair yazarlarının görüşlerini almak istiyorum.

Miyokardın enerji tüketimi (MEE) formülünde sistolik kan basıncı, sol ventrikül sistol sonu çapı, sol ventrikül sistol sonu arka duvar kalınlığı, atım hacmi ve sol ventrikül çıkış yolu ejeksiyon süresi kullanıldığı yazarlar tarafından da vurgulanmıştır. Bu ekokardiyografik parametrenin formülüne bakıldığında ve yayınlarla da desteklendiği üzere ejeksiyon fraksiyonu, sol ventrikül dilatasyonu, atım hacmi, sol ventrikül ejeksiyon süresi ile belirgin ilişkisi gösterilmiştir.^[2] MEE’nin koroner yavaş akım hastalarında kontrol grubuna göre azalmış olduğu saptanırken,^[3] kalp yetersizliğinde artmış olması ve kardiyovasküler mortalitenin bağımsız bir ön gördürücüsü olarak gösterilmesi^[4] henüz fikir birliğinin sağlanamadığı bir belirteç olduğu yargısına varıyor. Bu noktada çalışmalarında sirküferensiyel sistol sonu stresi,