

BÖLÜM 5

HİPERTANSİYON TEDAVİSİNDE β-BLOKERLER

Çağrı YAYLA¹

GİRİŞ

Yaklaşık 1 milyar insan veya dünyadaki yetişkin nüfusun ~%26'sı hipertansiyon- dan muzdarip olduğundan, hipertansiyon dünya çapında önemli bir halk sağlığı sorunudur.¹ Hipertansiyon, kardiyovasküler ve renal hastalık için önemli bir risk faktörüdür ve çok sayıda klinik çalışma, etkili tedavinin sağkalımı iyileştirdiğini ve kardiyovasküler faydalar sağladığını belgelemiştir.²

β-blokerler hipertansiyon tedavisinde en sık kullanılan ilaçlar arasındadır. Bu ajanlar, reçeteyle satılan en eski antihipertansif ajanlar arasındadır ve değiştirdikleri santral etkili ajanlardan ve ganglionik blokerlerden çok daha iyi tolere edilir. Ayrıca diğer kardiyovasküler hastalıklarda endike olma gibi özel bir avantaj sunarlar. Hipertansiyonu olan hastalarda endikedirler ve ayrıca anjina, miyokard enfarktüsü (MI), aritmiler, atriyal fibrilasyonun hız kontrolü, kronik kalp yetmezliği gibi diğer durumlar için ve tirotoksikoz gibi hiperadrenerjik durumları olan hastalarda endikedirler. Migren ve esansiyel tremorlu olan hipertansif hastalarda da faydalıdır.³

β-blokerler homojen bir sınıf değildir. Son yıllarda labetalol, nebivolol, celiprolol ve karvedilol gibi vazodilatör β-blokerlerin kullanımı artmıştır. Nebivolol ile ilgili çalışmalar, santral kan basıncı, aort sertliği, endotel disfonksiyonu vb. üzerinde daha olumlu etkileri olduğunu göstermiştir. Yeni başlangıçlı diyabet riski üzerinde olumsuz bir etkisi yoktur ve cinsel işlev üzerinde daha az olumsuz etki de dahil olmak üzere klasik β-blokerlere göre daha olumlu bir yan etki profili vardır.^{4,5} Bisoprolol, karvedilol ve nebivololun kalp yetmezliğindeki randomize kontrollü çalışmalarla

¹ Doç. Dr., Sağlık Bilimleri Üniversitesi Ankara Şehir Hastanesi, Kardiyoloji Bölümü cagriyayla@gmail.com

SONUÇ

Sonuç olarak, Avrupa Kardiyoloji Derneği tarafından yayınlanan 2018 Arteryel Hipertansiyon kılavuzunda β-blokerler, kullanımları için belirli bir endikasyon olduğunda, örneğin kalp yetmezliği, anjina, MI sonrası, atriyal fibrilasyon veya hamileliği olan veya hamileliği planlayan genç kadınlar gibi durumlarda düşünülmesi önerilmektedir.³³

KAYNAKLAR

1. Kearney PM, Whelton M, Reynolds K, Muntner P, Whelton PK, He J. Global burden of hypertension: analysis of worldwide data. *Lancet.* 2005;365(9455):217-23.
2. Blood Pressure Lowering Treatment Trialists C, Turnbull F, Neal B, Ninomiya T, Algert C, Arima H, et al. Effects of different regimens to lower blood pressure on major cardiovascular events in older and younger adults: meta-analysis of randomised trials. *Bmj.* 2008;336(7653):1121-3.
3. Laroche P, Tobe SW, Lacourciere Y. beta-Blockers in hypertension: studies and meta-analyses over the years. *The Canadian journal of cardiology.* 2014;30(5 Suppl):S16-22.
4. Bakris GL, Fonseca V, Katholi RE, McGill JB, Messerli FH, Phillips RA, et al. Metabolic effects of carvedilol vs metoprolol in patients with type 2 diabetes mellitus and hypertension: a randomized controlled trial. *Jama.* 2004;292(18):2227-36.
5. Ayers K, Byrne LM, DeMatteo A, Brown NJ. Differential effects of nebivolol and metoprolol on insulin sensitivity and plasminogen activator inhibitor in the metabolic syndrome. *Hypertension.* 2012;59(4):893-8.
6. Ponikowski P, Voors AA, Anker SD, Bueno H, Cleland JGF, Coats AJS, et al. 2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC) Developed with the special contribution of the Heart Failure Association (HFA) of the ESC. *European heart journal.* 2016;37(27):2129-200.
7. Huang HL, Fox KA. The impact of beta-blockers on mortality in stable angina: a meta-analysis. *Scottish medical journal.* 2012;57(2):69-75.
8. Lindholm LH, Carlberg B, Samuelsson O. Should beta blockers remain first choice in the treatment of primary hypertension? A meta-analysis. *Lancet.* 2005;366(9496):1545-53.
9. Khan N, McAlister FA. Re-examining the efficacy of beta-blockers for the treatment of hypertension: a meta-analysis. *CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne.* 2006;174(12):1737-42.
10. Thomopoulos C, Parati G, Zanchetti A. Effects of blood pressure lowering on outcome incidence in hypertension: 4. Effects of various classes of antihypertensive drugs--overview and meta-analyses. *Journal of hypertension.* 2015;33(2):195-211.
11. Ettehad D, Emdin CA, Kiran A, Anderson SG, Callender T, Emberson J, et al. Blood pressure lowering for prevention of cardiovascular disease and death: a systematic review and meta-analysis. *Lancet.* 2016;387(10022):957-67.
12. Williams B, Lacy PS, Thom SM, Cruickshank K, Stanton A, Collier D, et al. Differential impact of blood pressure-lowering drugs on central aortic pressure and clinical outcomes: principal results of the Conduit Artery Function Evaluation (CAFE) study. *Circulation.* 2006;113(9):1213-25.
13. Mancia G, Fagard R, Narkiewicz K, Redon J, Zanchetti A, Bohm M, et al. 2013 ESH/ESC guidelines for the management of arterial hypertension: the Task Force for the Management of Arterial Hypertension of the European Society of Hypertension (ESH) and of the European Society of Cardiology (ESC). *European heart journal.* 2013;34(28):2159-219.
14. Dondi TB, Hall M, West RM, Jernberg T, Lindahl B, Bueno H, et al. beta-Blockers and Mortality After Acute Myocardial Infarction in Patients Without Heart Failure or Ventricular Dysfunction. *Journal of the American College of Cardiology.* 2017;69(22):2710-20.
15. Corrao G, Zambon A, Parodi A, Poluzzi E, Baldi I, Merlini L, et al. Discontinuation of and changes in drug therapy for hypertension among newly-treated patients: a population-based study in

- Italy. Journal of hypertension. 2008;26(4):819-24.
16. MRC trial of treatment of mild hypertension: principal results. Medical Research Council Working Party. British medical journal. 1985;291(6488):97-104.
 17. Medical Research Council trial of treatment of hypertension in older adults: principal results. MRC Working Party. Bmj. 1992;304(6824):405-12.
 18. Wilhelmsen L, Berglund G, Elmfeldt D, Fitzsimons T, Holzgreve H, Hosie J, et al. Beta-blockers versus diuretics in hypertensive men: main results from the HAPPY trial. Journal of hypertension. 1987;5(5):561-72.
 19. Wikstrand J, Warnold I, Olsson G, Tuomilehto J, Elmfeldt D, Berglund G. Primary prevention with metoprolol in patients with hypertension. Mortality results from the MAPHY study. Jama. 1988;259(13):1976-82.
 20. Dahlof B, Lindholm LH, Hansson L, Schersten B, Ekbom T, Wester PO. Morbidity and mortality in the Swedish Trial in Old Patients with Hypertension (STOP-Hypertension). Lancet. 1991;338(8778):1281-5.
 21. Hansson L, Lindholm LH, Ekbom T, Dahlof B, Lanke J, Schersten B, et al. Randomised trial of old and new antihypertensive drugs in elderly patients: cardiovascular mortality and morbidity the Swedish Trial in Old Patients with Hypertension-2 study. Lancet. 1999;354(9192):1751-6.
 22. Efficacy of atenolol and captopril in reducing risk of macrovascular and microvascular complications in type 2 diabetes: UKPDS 39. UK Prospective Diabetes Study Group. Bmj. 1998;317(7160):713-20.
 23. Pepine CJ, Handberg EM, Cooper-DeHoff RM, Marks RG, Kowey P, Messerli FH, et al. A calcium antagonist vs a non-calcium antagonist hypertension treatment strategy for patients with coronary artery disease. The International Verapamil-Trandolapril Study (INVEST): a randomized controlled trial. Jama. 2003;290(21):2805-16.
 24. Dahlöf B, Devereux RB, Kjeldsen SE, Julius S, Beevers G, de Faire U, et al. Cardiovascular morbidity and mortality in the Losartan Intervention For Endpoint reduction in hypertension study (LIFE): a randomised trial against atenolol. Lancet. 2002;359(9311):995-1003.
 25. Black HR, Elliott WJ, Grandits G, Grambsch P, Luente T, White WB, et al. Principal results of the Controlled Onset Verapamil Investigation of Cardiovascular End Points (CONVINCE) trial. Jama. 2003;289(16):2073-82.
 26. Dahlöf B, Sever PS, Poulter NR, Wedel H, Beevers DG, Caulfield M, et al. Prevention of cardiovascular events with an antihypertensive regimen of amlodipine adding perindopril as required versus atenolol adding bendroflumethiazide as required, in the Anglo-Scandinavian Cardiac Outcomes Trial-Blood Pressure Lowering Arm (ASCOT-BPLA): a multicentre randomised controlled trial. Lancet. 2005;366(9489):895-906.
 27. Williams B, Lacy PS, Thom SM, Cruickshank K, Stanton A, Collier D, et al. Differential impact of blood pressure-lowering drugs on central aortic pressure and clinical outcomes: principal results of the Conduit Artery Function Evaluation (CAFE) study. Circulation. 2006;113(9):1213-25.
 28. Staessen JA, Wang JG, Thijss L. Cardiovascular protection and blood pressure reduction: a meta-analysis. Lancet. 2001;358(9290):1305-15.
 29. Wiysonge CS, Bradley HA, Volmink J, Mayosi BM, Mbewu A, Opie LH. Beta-blockers for hypertension. The Cochrane database of systematic reviews. 2012;11:Cd002003.
 30. Kuyper LM, Khan NA. Atenolol vs nonatenolol β -blockers for the treatment of hypertension: a meta-analysis. The Canadian journal of cardiology. 2014;30(5 Suppl):S47-53.
 31. Turnbull F, Neal B, Ninomiya T, Algert C, Arima H, Barzi F, et al. Effects of different regimens to lower blood pressure on major cardiovascular events in older and younger adults: meta-analysis of randomised trials. Bmj. 2008;336(7653):1121-3.
 32. Law MR, Morris JK, Wald NJ. Use of blood pressure lowering drugs in the prevention of cardiovascular disease: meta-analysis of 147 randomised trials in the context of expectations from prospective epidemiological studies. Bmj. 2009;338:b1665.
 33. Williams B, Mancia G, Spiering W, Agabiti Rosei E, Azizi M, Burnier M, et al. 2018 ESC/ESH Guidelines for the management of arterial hypertension. European heart journal. 2018;39(33):3021-104.