BÖLÜM 33

DİĞER KARDİYAK İLAÇLAR (MİTODRİN, KOLŞİSİN, SİLOSTAZOL, PENTOKSİFİLİN)

Gökhan DEMİRCİ[1]

MİTODRİN

Farmakolojik Özellikler

Midodrin, güçlü ve seçici, çevresel olarak etkili bir a-reseptör agonistidir ve bugüne kadar a1 veya a2-reseptörlerinde tercihli olarak hangisinin üzerinde etki gösterdiği gösterilmemiştir. Oral veya intravenöz uygulamadan sonra, sağlıklı gönüllülerde sırtüstü ve ayakta kan basınçlarında orta düzeyde artışlara neden olur. Ortostatik hipotansiyonu olan hastalarda kan basıncını önemli ölçüde artırır, venöz kapasiteyi azaltır ve sırtüstü ve ayakta kalp atım hızlarını düşürür. Hipotansif hastalarda gözlenen periferik vasküler dirençte eş zamanlı ve önemli bir artış, artan kan basıncının nedeni olarak öne sürülmüştür. Midodrin ayrıca plazma ve kan hacminde önemli bir azalmaya neden olur.

Farmakokinetik çalışmalar, sağlıklı gönüllülerde midodrinin hızla ve neredeyse tamamen emildiğini ve 2.5 ila 5 mg'lık bir dozun 40 dakikası içinde yaklaşık 10 ila 50 µg/L maksimum plazma konsantrasyonuna ulaştığını göstermektedir. Oral veya intravenöz uygulamadan sonra midodrin, farmakolojik olarak aktif metaboliti olan de-glimidodrin'i serbest bırakmak için sistemik dolaşımda enzimatik hidrolize uğrar. Gönüllülerde ve hipotansif hastalarda tek bir oral midodrin dozundan yaklaşık 1 saat sonra de-glimidodrin tepe plazma konsantrasyonlarına ulaşılır. Midodrinin (de-glimidodrin olarak) mutlak biyoyararlanımı oral tabletler için %93 ve oral solüsyon için %90'dır. Midodrin 2 saat sonra plazmadan temizlenir (eliminasyon yarı

[1] Uzm. Dr., İstanbul Mehmet Akif Ersoy Göğüs Kalp ve Damar Cerrahisi Eğitim ve Araştırma Hastanesi, gkhncardio@gmail.com

Dozaj ve Uygulama

Perifer arter hastalığında günde üç kez ağızdan 400 mg'dır.[23]

KAYNAKLAR

1. McTavish D, Goa KL. Midodrine. A review of its pharmacological properties and therapeutic use in orthostatic hypotension and secondary hypotensive disorders. Drugs. 1989 Nov;38(5):757-77.
2. Sun, M., Biggs, R., Hornick, J., & Marko, J. F. (2018). Condensin controls mitotic chromosome stiffness and stability without forming a structurally contiguous scaffold. Chromosome Research, 26(4), 277-295.
3. Schenone, A. L., & Menon, V. (2018). Colchicine in pericardial disease: from the underlying biology and clinical benefits to the drug-drug interactions in cardiovascular medicine. Current Cardiology Reports, 20(8), 1-10.
4. Davis MW, Wason S.. Effect of steady-state atorvastatin on the pharmacokinetics of a single dose of colchicine in healthy adults under fasted conditions. Clin Drug Investig 2014;34:259–67.
5. Slobodnick A, Shah B, Krasnokutsky S, Pillinger MH. Update on colchicine, 2017. Rheumatology (Oxford). 2018 Jan 1;57(suppl_1):i4-i11.
6. Kawaguchi M, Takahashi M, Hata T. et al. Inflammasome activation of cardiac fibroblasts is essential for myocardial ischemia/reperfusion injury. Circulation 2011;123:594–604.
7. Shah B, Allen N, Harchandani B. et al. Effect of colchicine on platelet-platelet and platelet-leukocyte interactions: a pilot study in healthy subjects. Inflammation 2016;39:182–9.
8. Nidorf SM, Eikelboom JW, Budgeon CA, Thompson PL.. Low-dose colchicine for secondary prevention of cardiovascular disease. J Am Coll Cardiol 2013;61:404–10.
9. Tardif JC, Kouz S, Waters DD, et al. Efficacy and Safety of Low-Dose Colchicine after Myocardial Infarction. N Engl J Med. 2019 Dec 26;381(26):2497-2505.
10. Aghabiklooei A, Zamani N, Hassanian-Moghaddam H, Nasouhi S, Mashayekhian M.. Acute colchicine overdose: report of three cases. Reumatismo 2014;65:307–11.
11. Hung IFN, Wu AKL, Cheng VCC. et al. Fatal interaction between clarithromycin and colchicine in patients with renal insufficiency: a retrospective study. Clin Infect Dis 2005;41:291–300.
12. Stamp LK. Safety profile of anti-gout agents. Curr Opin Rheumatol 2014;26:162–8.
13. Kuncl RW, Duncan G, Watson D. et al. Colchicine myopathy and neuropathy. N Engl J Med 1987;316:1562–8.
14. Leung YY, Yao Hui LL, Kraus VB.. Colchicine—update on mechanisms of action and therapeutic uses. Semin Arthritis Rheum 2015;45:341–50.
15. Khanna D, Khanna PP, Fitzgerald JD. et al. 2012 American College of Rheumatology guidelines for management of gout. Part 2: therapy and antiinflammatory prophylaxis of acute gouty arthritis. Arthritis Care Res 2012;64:1447–61.
16. Bhatt, Deepak L. Cardiovascular intervention: a companion to Braunwald's heart disease e-book. Elsevier Health Sciences, 2015.
17. Lee SW, Chun KJ, Park SW, et al. Comparison of Triple Antiplatelet Therapy and Dual Antiplatelet Therapy in Patients at High Risk of Restenosis After Drug-Eluting Stent Implantation (from the DECLARE-DIABETES and -LONG Trials). Am J Cardiol Elsevier Inc.; 2010; 105: 168-173.
18. Suh JW, Lee SP, Park KW, et al. Multicenter randomized trial evaluating the efficacy of cilostazol on ischemic vascular complications after drug-eluting stent implantation for coronary heart disease: Results of the CILON-T (influence of cilostazol-based triple antiplatelet therapy on is. J Am Coll Cardiol Elsevier Inc.; 2011; 57: 280-289.
19. Warner CJ, Greaves SW, Larson RJ, et al. Cilostazol is associated with improved outcomes after peripheral endovascular interventions. J Vasc Surg Society for Vascular Surgery; 2014; 59: 1607-1614.
20. Beebe HG, Dawson DL, Cutler BS, et al. A new pharmacological treatment for intermittent claudication: results of a randomized, multicenter trial. Arch Intern Med 1999; 159: 2041-2050.

21. Ward A, Clissold SP. Pentoxifylline. A review of its pharmacodynamic and pharmacokinetic properties, and its therapeutic efficacy. Drugs. 1987 Jul;34(1):50-97.
22. Ciuffetti G, Mercuri M, Ott C, et al. Use of pentoxifylline as an inhibitor of free radical generation in peripheral vascular disease. Results of a double-blind placebo-controlled study. Eur J Clin Pharmacol. 1991;41(6):511-5.
23. Annamaraju, Pavan, and Krishna M. Baradhi. "Pentoxifylline." StatPearls (2021).
24. Dawson DL, Cutler BS, Hiatt WR, et al. A comparison of cilostazol and pentoxifylline for treating intermittent claudication. Am J Med. 2000 Nov;109(7):523-30.
25. Jull AB, Arroll B, Parag V, et al. Pentoxifylline for treating venous leg ulcers. Cochrane Database Syst Rev. 2012 Dec 12;12:CD001733.
26. Parker R, Armstrong MJ, Corbett C, et al. Systematic review: pentoxifylline for the treatment of severe alcoholic hepatitis. Aliment Pharmacol Ther. 2013 May;37(9):845-54.