Effectiveness of Mebeverine in patients with postcholecystectomy gastrointestinal spasm: Results of prospective observational program "odyssey"

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Abstract

© 2018 Media Sphera Publishing Group. All rights reserved. Aim: to assess the effectiveness of mebeverine 200 mg BID in patients with post-cholecystectomy gastrointestinal spasm not requiring surgical treatment. Materials and methods. 218 patients were included in 16 clinical centers in 14 cities in Russia. All patients had post-cholecystectomy gastrointestinal spasms, not requiring surgical treatment and received mebeverine (Duspatalin®) 200 mg BID. The observational assessment period lasted from the moment of their inclusion into the study up to 6 weeks post inlusion. The therapy results were evaluated using visual analog scales (GPA and 11-point numeric rating scale) by patient self-assessment of the dynamics of spasm/discomfort and other postcholecystectomic gastrointestinal symptoms after 2 and 6 weeks of treatment. Gastrointestinal Quality of Life Index (GIQLI) was used to assess patient quality of life. Results and discussion. All 218 patients completed the 2-week mebeverine treatment course, 101 of them finished the 6-week course ("prolonged population"). Significant positive changes in the relief of abdominal pain and dyspepsia were noted as well as normalization of stool frequency and consistency. A more marked change in values was observed during prolonged (up to 6 weeks) therapy. Both 2-week and 6-week mebeverine courses led to a normalization of patient quality of life. After 6 week therapy, an effect of mebeverine on the quality of life 91% of patients was observed comparable to cholecystectomy itself, speficially related to the quality of life subscore 'symptoms'. Conclusion. The results of our study demonstrate that mebeverine (Duspatalin®) therapy leads to an effective elimination of clinical symptoms associated with post-cholecystectomy GI-spasm disorders, like abdominal pain, symptoms of dyspepsia and stooldisorders. A more marked change in values was observed during prolonged (up to 6 weeks) therapy.

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Keywords

"Odyssey", Abdominal pain, Cholecystectomy, Gallstone disease (GD), Mebeverine, PCS, Postcholecystectomy spasm and disorders

References

 Ivashkin VT, Maev IV, Baranskaya EK, et al. Recommendations of the Russian gastroenterological association for the diagnosis and treatment of cholelithiasis. Rossiyskiy Zhurnal Gastroenterologii, Gepatologii, Koloproktologii. 2016;26(3):64-80 (In Russ.)

- [2] EASL Clinical Practice Guidelines on the prevention, diagnosis and treatment of gallstones. J Hepatol. 2016;65(1):146-181.
- [3] Hauser SC, ed. Mayo Clinic gastroenterology and hepatology board review. 5 ed. oxford University Press; 2015.
 425 p.
- [4] Wang DQ, Afdhal NH. Gallstone Disease. In: Feldman M, Friedman LS, Brandt LJ, eds. Sleisenger and Fordtran's Gastrointestinal and Liver Disease: Pathophysiology, Diagnosis, Management. 10 ed. Elsevier; 2015.
- [5] Ros E, Zambon D. Postcholecystectomy symptoms. A prospective study of gall stone patients before and two years after surgery. Gut. 1987;28(11):1500-1504.
- [6] Finan KR, Leeth RR, Whitley BM, Klapow JC, Hawn MT. Improvement in gastrointestinal symptoms and quality of life after cholecystectomy. Am J Surg. 2006;192(2):196-202.
- [7] Weinert CR, Arnett D, Jacobs D Jr, Kane RL. Relationship between persistence of abdominal symptoms and successful outcome after cholecystectomy. Arch Intern Med. 2000;160(7):989-995.
- [8] Eremina EYu. Zhelchnokamennaya bolezn': do i posle kholetsistektomii. Metodicheskie ukazaniya dlya vrachey [Gallstone disease: before and after cholecystectomy. Methodical instructions for doctors]. Saransk; 2014 (In Russ.)
- [9] Arutyunov GP, Martynov AI, Spasskiy AA. Rukovodstvo po vnutrenney meditsine [Guide to Internal Medicine]. Moscow; 2015 (In Russ.)
- [10] Kennedy TM, Jones RH. Epidemiology of cholecystectomy and irritable bowel syndrome in a UK population. Br J Surg. 2000;87:1658-1663.
- [11] Kirk G, Kennedy R, McKie L, et al. Preoperative symptoms of irritable bowel syndrome predict poor outcome after laparoscopic cholecystecomy. Surg Endosc. 2011;25:3379-3384.
- [12] Yamada T, ed. Textbook of gastroenterology. 2 ed. Philadelphia: Lippincott; 1995.
- [13] Zhou PH, Liu FL, Yao LQ, Qin XY. Endoscopic diagnosis and treatment of postcholecystectomy syndrome. Hepatobil Pancreat Dis Int. 2003;2:117-120.
- [14] Jaunoo SS, Mohandas S, Almond LM. Postcholecystectomy syndrome (PCS). Int J Surg. 2010;8(1):15-17.
- [15] Minushkin ON. Syndrome after cholecystectomy in the practice of the therapist and gastroenterologist. Lechashchiy Vrach. 2015;(2):40-46 (In Russ.)
- [16] Jensen SW. Postcholecystectomy Syndrome Clinical Presentation. In.: MedScape. 2016. Available from: https://emedicine.medscape.com/article/192761-clinical
- [17] Filip M, Saftoiu A, Popescu C, Gheonea DI, Iordache S, Sandulescu L, Ciurea T. Postcholecystectomy Syndrome an Algoritmic Approach. J Gastrointestin Liv Dis. 2009;18(1):67-71.
- [18] Trukhan DI, Viktorova IA, Lyalyukova EA. Bolezni zhelchnogo puzyrya i zhelchevyvodyashchikh putey [Diseases of the gall bladder and biliary tracts]. St. Petersburg: SpetsLit; 2011. 127 p. (In Russ.)
- [19] Il'chenko AA. Bolezni zhelchnogo puzyrya i zhelchnykh putey: Rukovodstvo dlya vrachey [Diseases of the gallbladder and biliary tract: A guide for doctors]. 2 ed. Moscow: Meditsinskoe informatsionnoe agentstvo; 2011. 880 p. (In Russ.)
- [20] Il'chenko AA, Bystrovskaya EV. The experience of using Duspatalin in functional disorders of the sphincter of oddi in patients who underwent cholecystectomy. Eksperimental'naya i Klinicheskaya Gastroenterologiya. 2002;(4):21-22 (In Russ.)
- [21] Movchun VA, Ardatskaya MD, Isakova oV, Lipnitskiy EM Efficacy of duspatalin in the treatment and prevention of postcholecystectomy syndrome. Vestnik Rossiyskoy Akademii Meditsinskikh Nauk. 2011;(1):7-11 (In Russ.)
- [22] Drossman DA. The functional gastrointestinal disorders and the Rome III process. Gastroenterology. 2006 Apr;130(5):1377-1390.
- [23] Shi HY1, Lee KT, Lee HH, Uen YH, et al. The minimal clinically important difference in the Gastrointestinal Quality-of-Life Index after cholecystectomy. Surg Endosc. 2009;23(12):2708-2712.
- [24] Lamberts MP, Lugtenberg M, Rovers MM, Roukema AJ, Drenth JP, Westert GP, van Laarhoven CJ. Persistent and de novo symptoms after cholecystectomy: a systematic review of cholecystectomy effectiveness. Surg Endosc. 2013 Mar;27(3):709-718.
- [25] Gridneva SV. Dysfunction of sphincter oddy after cholecystectomy: mechanisms of development and treatment tactics. Suchasna gastroenterologiya. 2015;3(83):122-127 (In Russ.)
- [26] Fisher M et al. Diarrhoea after laparoscopic cholecystectomy: incidence and main determinants. ANZ J Surg. 2008;78:482-486.
- [27] Kucheryavyy YuA, Selezneva EYa, Kotovskiy AE, et al. Condition after cholecystectomy: surgeon, therapist, patient. Report of the expert council on postcholecystectomy disorders. Farmateka. 2013;20:64-68 (In Russ.)
- [28] Kulkarni A. Sphincter of oddi dysfunction. Pract Gastroenterol. 2010;March:28-41.
- [29] Kalaitzakis E, Ambrose T, et al. Management of patients with biliary sphincter of oddi disorder without sphincter of oddi manometry. BMC Gastroenterol. 2010 oct 22;10:124. doi: 10.1186/1471-230X-10-124

- [30] Khuroo MS, et al. Efficacy of nifedipine therapy in patients with sphincter of oddi dysfunction: a prospective, double-blind, randomized, placebo-controlled, cross-over trial. Br J Clin Pharmac. 1992;33:477-485.
- [31] Federal guidelines on the use of medicines (formular system). Issue XVIII. Moscow: Widox; 2017 (In Russ.)
- [32] Ryzhichkina AN, osipenko MF, Kholin SI. Chronic abdominal pain and irritable bowel syndrome. Lechashchiy Vrach. 2011;(2):30-34 (In Russ.)
- [33] Cash BD, Lacy BE, Schoenfeld PS. Safety of Eluxadoline in Patients with Irritable Bowel Syndrome with Diarrhea. Am J Gastroenterol. 2017;112:365-374. doi: 10.1038/ajg.2016.542
- [34] Instructions for medical use of the preparation TrimedatR. Tablets 100 mg, 200 mg, of 20/03/2017 (In Russ.)
- [35] Khubutiya MSh, Popova TS, Saltanov AI, eds. Parenteral'noe i enteral'noe pitanie: Natsional'noe rukovodstvo [Parenteral and enteral nutrition: National guidelines]. Moscow: GEoTAR-Media; 2014. 800 p. (In Russ.) ISBN 978-5-9704-2853-5
- [36] FDA Safety Alerts for Human Medicinal Products. Viberzi (eluxadoline): Drug Safety Communication Increased Risk of Serious Pancreatitis In Patients Without A Gallbladder. Posted 03/15/2017.
- [37] Lindner A, Seizer H, Claassen V, et al. Pharmacological properties of mebeverine, a smooth-muscle relaxant. Arch Int Pharmacodyn. 1963;145(3):378-395.
- [38] Evans P, Bak Y, Kellow J. Mebeverine altered small bowel motility in irritable bowel syndrome. Aliment Pharmacol Ther. 1996;5:787-793.
- [39] Den Hertog A, Van den Akker J. Modification of a1-receptor channels by mebeverine in smooth muscle cells of guinea pig taenia caeci. Eur J Pharm. 1987;138:367-374.
- [40] Stockis A, et al. Identification of mebeverine acid as the main circulating metabolite of mebeverine in man. J Pharm Biomed Anal. 2002;29:335-340.
- [41] Abdel-Hamid SM, Abdel-Hady SE, El-Shamy, et al. Formulation of an antispasmodic drug as a topical local anestetic. Int J Pharm. 2006;326:107-118.