

44. Ginès P, Navasa M. Antibiotic prophylaxis for spontaneous bacterial peritonitis: how and whom? *J Hepatol*. 1998
45. Fernández J, Navasa M, Planas R, Montoliu S, Monfort D, Soriano G, Vila C, Pardo A, Quintero E, Vargas V, Such J, Ginès P, Arroyo V. Primary prophylaxis of spontaneous bacterial peritonitis delays hepatorenal syndrome and improves survival in cirrhosis. *Gastroenterology*. 2007 Sep;133(3):818-24.
46. Strauss E, Caly WR. Spontaneous bacterial peritonitis: a therapeutic update. *Expert Rev Anti Infect Ther*. 2006 Apr;4(2):249-60. Review.
47. Grangé JD, Roulot D, Pelletier G, Pariente EA, Denis J, Ink O, Blanc P, Richardet JP, Vinel JP, Delisle F, Fischer D, Flahault A, Amiot X. Norfloxacin primary prophylaxis of bacterial infections in cirrhotic patients with ascites: a double-blind randomized trial. *J Hepatol*. 1998 Sep;29(3):430-6.

Calitatea evidentei aflata la baza recomandarii

- I: Studii controlate randomizate
- II-A: Studii controlate fara randomizare
- II-B: Studii de cohorta sau studii analitice case-control
- II-C: experimente necontrolate, raportari multiple
- III: Opinii ale unor autoritati recunoscute, epidemiologie descriptiva

Peritonita bacteriana spontana

Ghid de diagnostic de tratament

1. Definitie

Peritonita bacteriana spontana (PBS) se defineste ca aparitia unei infectii a lichidului de ascita in absenta unei perforatii viscerale sau a unei alte surse de infectie intraabdominala (abces, pancreatita acuta, colecistita etc.).

2. Introducere

Pacienti cu risc inalt de PBS:

- *nivel al albuminei in lichidul de ascita < 1g/dl (evidenta I)*
- *hemoragie digestiva superioara (evidenta I)*
- *encefalopatie hepatica (evidenta IIA)*
- *insuficienta hepatica severa (evidenta IIA)*

3. Diagnosticul peritonitei bacteriene spontane

3.1 Manifestarile clinice

Manifestarile clinice ale PBS sunt polimorfe si nu se pot formula recomandari cu nivel semnificativ de evidenta privind criteriile de diagnostic clinic al PBS.

3.2 Indicatiile paracentezei exploratorii:

Paracenteza exploratorie este necesara la toti pacientii cu suspiciune clinica de PBS (**I**).

Paracenteza exploratorie este recomandata la pacientii cu encefalopatie hepatica, afectare renala, leucocitoza, chiar in prezena unui alt factor precipitant (**IIB**).

Paracenteza se asociaza cu un risc scazut de complicatii: hematom de perete abdominal (1%), hemoperitoneu (0,1%) si infectii iatrogene (0,1%) (**IIA**).

3.3 Examenul lichidului de ascita

3.3.1 Numarul de PMN in lichidul de ascita

Utilizarea bandeletelor impregnate cu leucocitesteraza reprezinta o metoda rapida si sigura de screening al PBS (**IIB**).

Daca este ascita hemoragica se va face corectia numarului de leucocyte. Astfel, daca numarul de hematii depaseste 10.000/mmc se scade 1 PMN pentru fiecare 250 de hematii (**I**).

3.3.2 Examenul bacteriologic in PBS

Frotiul din sedimentul lichidului de ascita nu este metoda de diagnostic al PBS (**I**).

Cultura lichidului de ascita se face pe flacon de hemocultura imediat dupa paracenteza („la patul pacientului”) (**IIB**). Daca PMN > 250/mmc si culturile sunt negative (ascita neutrocitica cu culturi

29. Strauss E, Caly WR. Spontaneous bacterial peritonitis: a therapeutic update. *Expert Rev Anti Infect Ther.* 2006 Apr;4(2):249-60.
30. Fernández J, Monteagudo J, Bargallo X, Jiménez W, Bosch J, Arroyo V, Navasa M. A randomized unblinded pilot study comparing albumin versus hydroxyethyl starch in spontaneous bacterial peritonitis. *Hepatology.* 2005 Sep;42(3):627-34.
31. Choi CH, Ahn SH, Kim DY, Lee SK, Park JY, Chon CY, Moon YM, Han KH. Long-term clinical outcome of large volume paracentesis with intravenous albumin in patients with spontaneous bacterial peritonitis: a randomized prospective study. *J Gastroenterol Hepatol.* 2005 Aug;20(8):1215-22.
32. Wong F, Bernardi M, Balk R, Christman B, Moreau R, Garcia-Tsao G, Patch D, Soriano G, Hoefs J, Navasa M; International Ascites Club. Sepsis in cirrhosis: report on the 7th meeting of the International Ascites Club. *Gut.* 2005 May;54(5):718-25. Review.
33. Fernández J, Navasa M, Garcia-Pagan JC, G-Abraldes J, Jiménez W, Bosch J, Arroyo V. Effect of intravenous albumin on systemic and hepatic hemodynamics and vasoactive neurohormonal systems in patients with cirrhosis and spontaneous bacterial peritonitis. *J Hepatol.* 2004 Sep;41(3):384-90.
34. Patch D, Burroughs A. Intravenous albumin in patients with cirrhosis and spontaneous bacterial peritonitis. *N Engl J Med.* 1999 Dec 2;341(23):1773-4. No abstract available.
35. Brand RE. Intravenous albumin in patients with cirrhosis and spontaneous bacterial peritonitis: is it worth the cost? *Am J Gastroenterol.* 1999 Dec;94(12):3404.
36. Runyon BA. Albumin infusion for spontaneous bacterial peritonitis. *Lancet.* 1999 Nov 27;354(9193):1838-9. Review.
37. Sort P, Navasa M, Arroyo V, Aldeguer X, Planas R, Ruiz-del-Arbol L, Castells L, Vargas V, Soriano G, Guevara M, Ginés P, Rodés J. Effect of intravenous albumin on renal impairment and mortality in patients with cirrhosis and spontaneous bacterial peritonitis. *N Engl J Med.* 1999 Aug 5;341(6):403-9.
38. Bass NM. Intravenous albumin for spontaneous bacterial peritonitis in patients with cirrhosis. *N Engl J Med.* 1999 Aug 5;341(6):443-4.
39. Strauss E, Caly WR. Spontaneous bacterial peritonitis: a therapeutic update. *Expert Rev Anti Infect Ther.* 2006 Apr;4(2):249-60. Review.
40. Lontos S, Gow PJ, Vaughan RB, Angus PW. Norfloxacin and trimethoprim-sulfamethoxazole therapy have similar efficacy in prevention of spontaneous bacterial peritonitis. *J Gastroenterol Hepatol.* 2007 Jun 7.
41. Alvarez RF, Mattos AA, Corrêa EB, Cotrim HP, Nascimento TV. Trimethoprim-sulfamethoxazole versus norfloxacin in the prophylaxis of spontaneous bacterial peritonitis in cirrhosis. *Arq Gastroenterol.* 2005 Oct-Dec;42(4):256-62.
42. Frazee LA, Marinos AE, Rybarczyk AM, Fulton SA. Long-term prophylaxis of spontaneous bacterial peritonitis in patients with cirrhosis. *Ann Pharmacother.* 2005 May;39(5):908-12. Epub 2005 Mar 15. Review.
43. Bauer TM, Folio A, Navasa M, Vila J, Planas R, Clemente G, Vargas V, Bory F, Vaquer P, Rodés J. Daily norfloxacin is more effective than weekly rufloxacin in prevention of spontaneous bacterial peritonitis recurrence. *Dig Dis Sci.* 2002 Jun;47(6):1356-61.

- spectrophotometric analysis to rapidly exclude spontaneous bacterial peritonitis: a pilot study. *Eur J Gastroenterol Hepatol*. 2007 Apr;19(4):289-95.
14. Kim DY, Kim JH, Chon CY, Han KH, Ahn SH, Kim JK, Paik YH, Lee KS, Moon YM. Usefulness of urine strip test in the rapid diagnosis of spontaneous bacterial peritonitis. *Liver Int*. 2005 Dec;25(6):1197-201.
 15. Runyon BA, Antillon MR, Akriavidis EA. Bedside inoculation of blood culture bottles with ascitic fluid is superior to delayed inoculation in the detection of spontaneous bacterial peritonitis. *J Clin Microbiol* 1990;28:2811-2
 16. Such J, Runyon BA. Spontaneous bacterial peritonitis. *Clin Infect Dis* 1998; 27: 669-674
 17. Akriavidis EA, Runyon BA. Utility of an algorithm in differentiating spontaneous from secondary bacterial peritonitis in cirrhosis. *Gastroenterology* 1990; 98:127-133.
 18. Wu SS, Liu OS, Chen YY, Hwang KL, Gou MS, Keeffe EB. Ascitic fluid carcinoembryonic antigen and alkaline phosphatase levels for the differentiation of primary from secondary bacterial peritonitis with intestinal perforation. *J Hepatol* 2001;34:215-221.
 19. Rimola A, Garcia-Tsao G, Navasa M, Piddock LJ, Planas R, Bernard B, Inadomi JM: Diagnosis, treatment and prophylaxis of spontaneous bacterial peritonitis: A consensus document. *J Hepatol* 2000; 32: 142–153.
 20. Caly WR, Strauss E: A prospective study of bacterial infections in patients with cirrhosis. *J Hepatol* 1993; 18: 353–358.
 21. Runyon BA: Ascites and spontaneous bacterial peritonitis; in Feldman M, Friedman LS, Sleisenger MH (eds): *Gastrointestinal and liver disease: Pathophysiology/diagnosis/management*, ed 7. Philadelphia, Saunders, 2002, pp 1517–1542.
 22. Garcia-Tsao G: Treatment of spontaneous bacterial peritonitis with oral ofl oxacin: inpatient or outpatient therapy? (letter). *Gastroenterology* 1996; 111: 1147–1149.
 23. Runyon BA, Akriavidis EA, Sattler FR, Cohen J: Ascitic fluid and serum cefotaxime and desacetyl cefotaxime levels in patients treated for bacterial peritonitis. *Dig Dis Sci* 1991; 36:1782–1786.
 24. Felisart J, Rimola A, Arroyo V, Perez-Ayuso RM, Quintero E, Gines P, Rodes J: Cefotaxime is more effective than ampicillin-tobramycin in cirrhotics with severe infections. *Hepatology* 1985; 5: 457–462.
 25. Navasa M, Follo A, Llovet JM, Clemente G, Vargas V, Rimola A, Marco F, Guarner C, Forne M, Planas R, Banares R, Castellas L, Jimenez De Anta MT, Arroyo V, Rodes J: Randomized, comparative study of oral ofl oxacin versus intravenous cefotaxime in spontaneous bacterial peritonitis. *Gastroenterology* 1996; 111: 1011–1017.
 26. Runyon BA, McHutchison JG, Antillon MR, Akriavidis EA, Montano AA: Short-course versus long-course antibiotic treatment of spontaneous bacterial peritonitis. *Gastroenterology* 1991; 100: 1737–1742.
 27. Ricart E, Soriano G, Novella MT, Ortiz J, Sabat M, Kolle L, Sola-Vera J, Minana J, Dedeu JM, Gomez C, Barrio JL, Guarner C: Amoxicillin- clavulanic acid versus cefotaxime in the therapy of bacterial infections in cirrhotic patients. *J Hepatol* 2000; 32: 596–602.

negative) trebuie exclude: pancreatita, peritonita secundara, tuberculoza, carcinomatoza peritoneala (**IIA**).

Daca PMN < 250/mmc, cultura este monomicrobiана (bacterascita nonneutrocitica) si sunt prezente semne clinice de PBS pacientul trebuie tratat ca PBS (**IIA**).

4. Diagnosticul diferential cu peritonita secundara

4.1 Peritonita bacteriana secundara

Nivelul scazut al glucozei, nivelul crescut al proteinelor, LDH, fosfatazei alcaline, antigenului carcinoembrionario sunt sugestive pentru peritonita bacteriana secundara (**IIA**).

Diagnosticul de peritonita secundara trebuie confirmat prin investigatii imagistice (ecografie, radiografie abdominala simpla, CT abdominal) (**IIA**).

5. Tratamentul peritonitei bacteriene spontane

5.1 Tratamentul antibiotic al peritonitei bacteriene spontane

Pacientii cu numar de PMN > 250/mmc trebuie sa primeasca tratament antibiotic empiric

- cefalosporina de generatia IIIa (cefotaxim 2g la 8 ore, ceftriaxon 2g la 24 ore (**I**)

- amoxicilina/acid clavulanic este o alternativa terapeutica (**I**)

Pacientii cu PMN < 250/mmc si semne de infectie (febra, durere abdominala) vor primi tratament antibiotic empiric pana la rezultatul culturilor (**IIC**).

Tratamentul cu Ofloxacin (400 mg la 12 ore) poate fi eficient la pacienti cu toleranta digestiva pastrata, cu encefalopatie hepatica < grad II si creatinina serica < 3 mg/dl (I).

5.2 Alte terapii in peritonita bacteriana spontana

Pacientii cu suspiciune clinica de PBS si PMN > 250/mmc vor primi tratament cu albumina 1,5 g/kgc in primele 6 ore de la diagnostic si 1 g/kgc in a treia zi (I).

5.3 Durata tratamentului

Antibioticele se mentin pana la disparitia semnelor de infectie, cel putin 5 zile (I).

5.4 Evaluarea raspunsului terapeutic

Cel putin o paracenteza de control trebuie efectuata la 48 de ore de la initierea tratamentului. Daca numarul de PMN creste, nu se modifica sau scade cu < 25% se ridică suspiciunea de peritonita secundara si se modifica tratamentul in consecinta (I).

5.5 Tratamentul profilactic al peritonitei bacteriene spontane

La pacientii cu HDS se face profilaxia PBS prin administrarea pe termen scurt (7 zile) de norfloxacin 400 mg x2/zi sau o chinolona cu administrare parenterala daca sangerarea este activa (I).

Dupa primul episod de PBS se face profilaxia pe termen lung cu administrare zilnica de norfloxacin 400 mg/zi sau trimetoprim/sulfametoxazol (I).

PBS este indicatie de transplant dupa rezolvarea episodului infectios (IIA).

Profilaxia PBS se face si la pacientii cu proteine totale in lichidul de ascita < 1g/l sau bilirubina serica > 2,5 mg/dl (I). Nu exista un consens privind durata profilaxiei la aceste categorii de pacienti.

Bibliografie

1. Moore KP, Aithal GP. Guidelines on the management of ascites in cirrhosis. Gut 2006;55:1-12
2. Rimola A, Navasa M. Infections in liver disease. In: Bircher J, Benhamou JP, McIntyre N, Rizzetto M, Rodés J, eds. Oxford Textbook of Clinical Hepatology, 2nd ed. Oxford: Oxford University Press, 1999; 1861–76.
3. Llach J, Rimola A, Navasa M, et al. Incidence and predictive factors of first episode of spontaneous bacterial peritonitis in cirrhosis with ascites: relevance of ascitic fluid protein concentration. Hepatology 1992; 16: 724–7.
4. Moore K. Spontaneous bacterial peritonitis (SBP). In Warrel DA et al. Oxford Textbook of Medicine, 4th Edition, Oxford University Press 2003, Vol 2, sections 11-17, 739-741
5. Rimola A, Navasa M. Infection in liver disease. In: Bircher J, Benhamou J, McIntyre N, Rizzetto M, Rodés J, editors. Oxford Textbook of Clinical Hepatology. New York: Oxford University Press, 1999: 1861-76.
6. Navasa M, Rimola A, Rodés J. Bacterial infections in liver disease. Semin Liver Dis. 1997;17:323-33.
7. Rimola A, Garcia-Tsao G, Navasa M, et al. Diagnosis, treatment, and prophylaxis of spontaneous bacterial peritonitis: a consensus document. J.Hepatol. 2000;32:142-53
8. Romney R, Mathurin P, Ganne-Carrié N, Halimi C, Medini A, Lemaitre P, Gruaud P, Jouannaud V, Delacour T, Boudjema H, Pauwels A, Chaput JC, Cadanel JF. Usefulness of routine analysis of ascitic fluid at the time of therapeutic paracentesis in asymptomatic outpatients. Results of a multicenter prospective study. Gastroenterol Clin Biol. 2005 Mar;29(3):275-9.
9. Grabau, CM, Crago, SF, Hoff, LK, et al. Performance standards for therapeutic abdominal paracentesis. Hepatology 2004; 40:484
10. Runyon, BA. Paracentesis of ascitic fluid: a safe procedure. Arch Intern Med 1986; 146:2259.
11. Sapey T, Kabissa D, Fort E, Laurin C, Mendler M H Instant diagnosis of spontaneous bacterial peritonitis using leukocyte esterase reagent strips: Nephur-Test vs. MultistixSG. Liver Int. 2005 Apr;25(2):343-8
12. Castellote J Can leukocyte esterase reagent strips be used for the diagnosis of spontaneous bacterial peritonitis? Nature Clinical Practice Gastroenterology & Hepatology 2005;2,566-567
13. Gaya DR, David B Lyon T, Clarke J, Jamdar S, Inverarity D, Forrest EH, John Morris A, Stanley AJ. Bedside leucocyte esterase reagent strips with