

DOI: 10.21767/2575-7733.100000E5

## Treatment of Patients with Cirrhosis

Marco Fiore<sup>1\*</sup>, Sebastiano Leone<sup>2</sup> and Maria Caterina Pace<sup>1</sup>

<sup>1</sup>Department of Anesthesiological, Surgical and Emergency Sciences, University of Campania "Luigi Vanvitelli, Naples, Italy

<sup>2</sup>Azienda Ospedaliera di Rilievo Nazionale San Giuseppe Moscati Hospital, Contrada Amoretti, 83100 Avellino AV, Italy

\*Corresponding author: Marco Fiore, Department of Anesthesiological, Surgical and Emergency Sciences, University of Campania "Luigi Vanvitelli", Naples 80138, Italy, Tel: +39 0815665180; E-mail: marco.fiore@hotmail.it

Rec date: Jan 07, 2017; Acc date: Feb 09, 2017; Pub date: Feb 11, 2017

Citation: Fiore M, Leone S, Pace MC. Treatment of Patients and Cirrhosis. J ClinGastroenterol Hepatol 2017, 1: 1.

### Editorial

Several influential authors in their recent review on the treatment of patients with cirrhosis [1-3] did not mention spontaneous fungal peritonitis (SFP) as a severe complication of liver cirrhosis. Spontaneous peritonitis (SP) is an infection of ascitic fluid of cirrhotics without an alternative intra-abdominal source of infection. If an ascitic fluid culture is performed, the growth of bacteria makes diagnosis of spontaneous bacterial peritonitis (SBP), instead the growth of fungi makes diagnosis of SFP. SFP prevalence varies from 3.6% to 41% of patients with a positive ascitic fluid culture; *Candida* spp. is the most common fungus isolated [4-6]. SFP mortality is very high ranging from 90% to 100% of patients [4,5]. Hospitalization seems to be a SFP risk factor [4,5]. In a randomized controlled trial, an antifungal agent was added in hospital-acquired SBP with no response to broad-spectrum antibacterial agents: the results of this study showed that addition of an antifungal agent are more effective than antibacterial alone as empirical antimicrobial treatment of SBP [7]. The available literature suggests that SFP should be considered in patients with SP non-responders to initial antibacterial therapy and/or at risk for fungal infections.

Serum Procalcitonin (PCT) test is quite sensitive and specific for the SBP diagnosis but it is not sufficient for the diagnosis without other clinical findings [8].

Ascitic calprotectin should to be an alternative method for SBP diagnosis in ESLD patients [9], so in the near future the association of serum PCT and ascitic calprotectin seems to be satisfactory for the diagnosis of SBP [10].

Unfortunately, these novel biomarkers purposed by literature do not discern the etiology of SP. Recently, label-free bimodal waveguide immunosensor (BiMW biosensor) demonstrated that the detection limits of the biosensor could reach few bacteria per milliliter. Based on the results obtained, we consider that the BiMW biosensor is positioned as a promising new clinical tool for user-friendly, cost-effective and real-time microbiological analysis [11].

*Studies are needed to further evaluate* the accuracy of ascitic fluid label-free bimodal waveguide immunosensor for the early diagnosis and follow-up of SFP.

### References

1. Ge PS, Runyon BA (2016) Treatment of patients with cirrhosis. *N Engl J Med* 375: 767-77.
2. Solà E, Solà C, Gina P (2016) Management of uninfected and infected ascites in cirrhosis. *Liver Int* 1: 109-115.
3. Dever JB, Sheikh MY (2015) Spontaneous bacterial peritonitis--Bacteriology, diagnosis, treatment, risk factors and prevention. *Aliment Pharmacol Ther* 41(11): 1116-1131
4. Lahmer T, Brandl A, Rasch S, Schmid RM, Huber W (2016) Fungal peritonitis: Underestimated disease in critically ill patients with liver cirrhosis and spontaneous peritonitis. *PLoS One* 11: e0158389.
5. Hwang SY, Yu SJ, Lee JH, Kim JS, Yoon JW, et al. (2014) Spontaneous fungal peritonitis: A severe complication in patients with advanced liver cirrhosis. *Eur J Clin Microbiol Infect Dis* 33: 259-64.
6. Karvellas CJ, Abraldes JG, Arabi YM, Kumar A (2015) Cooperative Antimicrobial Therapy of Septic Shock (CATSS) Database Research Group. Appropriate and timely antimicrobial therapy in cirrhotic patients with spontaneous bacterial peritonitis-associated septic shock: a retrospective cohort study. *Aliment Pharmacol Ther* 41: 747-757.
7. Piano S, Fasolato S, Salinas F, Romano A, Tonon M, et al. (2016) The empirical antibiotic treatment of nosocomial spontaneous bacterial peritonitis: Results of a randomized, controlled clinical trial. *Hepatology* 63: 1299-1309.
8. Yang Y, Li L, Qu C, Zeng B, Liang S, et al. (2015) Diagnostic accuracy of serum procalcitonin for spontaneous bacterial peritonitis due to end-stage liver disease: A meta-analysis. *Medicine* 94: e2077.
9. Fernandes SR, Santos P, Fatela N, Baldaia C, Tato Marinho R, et al. (2016) Ascitic calprotectin is a novel and accurate marker for spontaneous bacterial peritonitis. *J Clin Lab Anal* 30: 1139-1145.
10. Abdel-Razik A, Mousa N, Elhammady D, Elhelaly R, Elzehery R, et al. (2016). Ascitic fluid calprotectin and serum procalcitonin as accurate diagnostic markers for spontaneous bacterial peritonitis. *Gut Liver* 10: 624-631.
11. Maldonado J, González-Guerrero AB, Domínguez C, Lechuga LM, (2016) Label-free bimodal waveguide immunosensor for rapid diagnosis of bacterial infections in cirrhotic patients. *Biosens Bioelectron.* 85: 310-316.