

References

- Abdel Aziz F, Habib M, Mohamed M. et al., (2001):** Hepatitis virus (HCV) infection in community in Nile Delta population description and HCV prevalence. *Hepatology*; 32 (1): 111-5.
- Al-Nawas B and Shah PM. (1996):** Procalcitonin in patients with and without immunosuppression and sepsis. *Infection*; 24:434-436.
- Albers I, Hartman H, Birchor J.(1989):** Superiority of Child Pugh classification to quantitative liver function tests for assessing prognosis of liver cirrhosis. *Scand. J. Gastroenterol*, 24: 69-76.
- Andreu M, Sola R and Sitges-Seraa A, (1993):** risk factor of spontaneous bacterial peritonitis *Gastroenterology*, 104: 1133-1138.
- Angelico M, Renganathan E, Gandin C, et al., (1997):** Chronic liver disease in the Alexandria governorate Egypt. Contribution of schistosomiasis and hepatitis virus infections. *J. Hepatol*; 26 (2): 236-243.
- Arroyo V, Guevara M and Gines P. (2002)** Hepatorenal syndrome in cirrhosis pathogenesis and treatment. *Gastronterology*; 122:1658-1676.
- Assicot M, Bohuon C and Petitjean S. (1999)** Blood Procalcitonin is a new biological marker of the bacterial infection. New data on the specificity. *Clin Intens Care suppl.* 2; 5:88.
- Assicot M, Gendrel D, Carsin H, et al.,(1993):**High serum procalcitonin concentrations in patients with sepsis and infection. *Lancet*.341:515–518.
- Balog A, Ocsovszki I and Mandi Y. (2002):** Flow cytometric analysis of procalcitonin expression in human monocytes and granulocytes. *Immunol Lett*; 84:199 –203.
- Bates DO, Lodwick D and Williams B. (1999):** Vascular endothial growth factor and microvascular permeability. *Microcirculation*; 6: 83-96.
- Bercovici et al. (1975):** anti microbial activity of human peritoneal fluid. *Surg. Gycol.obst.* 141: 885-887
- Bernard L, Ferriere F, Canassus P. Ma- las F, et al (1998):** Procalcitonin as an early marker of bacterial infection in severely neutropenic febrile adults. *Clin Infect Dis* 27: 914-915

- Bhura M, Ganger D and Jensen D. (1994):** Spontaneous bacterial peritonitis: An update on management and prevention. *The American Journal of Medicine* 97: 169-175
- Bleichner G, Boulanger R, Squara P, et al., (1986):** frequency of infection in cirrhotic patients presenting with acute gastrointestinal haemorrhage. *Br.j.surg.* 73: 724-726.
- Bonac B, Derganc M, Wraber B, et al.,(2000):** Interleukin-8 and procalcitonin in early diagnosis of early severe bacterial infection in critically ill neonates. *Pflugers Arch Eur J Physiol*; 440: R72-R74
- Bota D, Nuffelen M, Zakariah A, et al., (2005):** Serum levels of C-reactive protein and procalcitonin in critically ill patients with cirrhosis of the liver Route de Lennik 808, B-1070 Brussels, Belgium; e-mail: jlvincen@ulb.ac.be.0022-2143/\$
- Bracq S and Machason M. (1993):** Calcitonin gene expression in normal human liver. *FEBS* ; 331:14-18.
- Brunkhorst FM, Heinz U, Forycki ZF.(1998):** Kinetics of procalcitonin in iatrogenic sepsis. *Intens Care Med* 1998; 24:888-892.
- Brunkhorst FM, Wegscheider K, Forycki ZF, et al., (2000):**
Procalcitonin for early diagnosis and differentiation of SIRS, sepsis, severe sepsis, and septic shock. *Intensive Care Med*; 26 Suppl:S148-S152.
- Byl B, Roucloux I, Crusiaux A, et al., (1993):** Tumor necrosis factor alpha and interleukin 6 plasma levels in infected cirrhotic patients. *Gastroenterology*, 104: 1492-1497
- Calabro P, Willerson JT, Yeh, et al.,(2003):** Inflammatory cytokines stimulated C-reactive protein production by human coronary artery smooth muscle cells. *Circulation*; 108:1930 –1932.
- Campillo B, Richardet JP, Dupeyron C. (2002):** Nosocomial spontaneous bacterial peritonitis and bacteremia in cirrhotic patients: impact of isolate type and prognosis and characteristics of infection. *Clin Infect Dis*; 35:1-10.
- Campillo B, Richardet JP, Dupeyron C. (2006):** diagnostic value of reagent strips in SBP. *GASTRENTROL clin boil*:30:446-452
- Campillo B, Sherman E, Richardet JP, Bories PN. (2001):** Serum leptin levels in alcoholic liver cirrhosis: relationship with gender, nutritional

status, liver function and energy metabolism. *Eur J Clin Nutr*; 55:980–988.

Carey W, Boayke A and Leatheran J. (1986): Spontaneous bacterial peritonitis: clinical and laboratory features with reference to hospital acquired cases. *Am. J. Gastroenterol*, 81: 1161-65.

Casafont F, de las Heras G, Martin L, et al., (1997): Influence of malnutrition on the prevalence of bacterial translocation and spontaneous bacterial peritonitis in Experimental cirrhosis in rats. *Hepatology*, 25: 1334-37.

Casafont F, Reviro M, Fernandez, et al. (1999): Granulocyte elastase in cirrhotic patients with spontaneous bacterial peritonitis *Dig. Dis. Sci.*, 44: 1334-37.

Castelli GP, Pognani C, Cita M, et al., (2006): Procalcitonin and C-reactive protein during systemic inflammatory response syndrome, sepsis and organ dysfunction. *Critical Care* ;8:R234-R242.

Castellote J, Lopez C, Gornals J, et al., (2003): Rapid diagnosis of spontaneous bacterial peritonitis by use of reagent strips. *Hepatology*; 37:893-6.

Castellote J, Xiol X and Verdageur R, (1990): Comparison of two ascitic fluid culture methods in cirrhotic patients with spontaneous bacterial peritonitis. *Am. J. gastroenterol*; 85: 1605-1608.

Chan YL, Tseng CP, Tsay PK, et al., (2004) Procalcitonin as a marker of bacterial infection in the emergency department: an observational study. *Critical Care*; 8:R12-R20.

Chang CS, Chen GH and Lien HC (1998): Small Intestine dysmotility and bacterial overgrowth in cirrhotic patients with spontaneous bacterial peritonitis. *Hepatology*; 28: 1187-1190.

Chiesa C, Panero A, Rossi N, et al., (1998): Reliability of procalcitonin concentrations for the diagnosis of sepsis in critically ill neonates. *Clin Infect Dis*; 26: 664-672

Clark JH. (1994): Spontaneous bacterial peritonitis. *Journal of pediatrics*; 104: 495-9.

Claeys R, Vinken S, Spapen H, et al (2002): Plasma procalcitonin and C-reactive protein in acute septic shock: *Crit Care Med* 30,757-762

Conn HO. (1982): In: *Disease of the liver*, 5th edt, Schiff, L. and Schiff, E.R. (eds), W.B. Lippincott Company Chapter 23, PP. 848-955.

- Connert S, Stremmel W, Elsing C. (2003):** Procalcitonin is a valid marker of infection in decompensated cirrhosis. *Gastroenterol* ; 41:165–170.
- Dandona P, Nix D, Wilson MF, et al.,(1994):**Procalcitonin increase after endotoxin injection in normal subjects. *J Clin Endocrinol Metab* ; 79:1605–1608.
- Dc Werra I, Jaccard C, Corradin SB, et al., (1997):** Cytokines, nitrite/nitrate, soluble tumor necrosis factor receptors, and procalcitonin concentrations: comparisons in patients with septic shock, cardiogenic shock, and bacterial pneumonia. *Crit Care Med* 25: 607—613
- Deitch E, Morrison J, Berg R, et al., (1990):** effect of haemorrhagic shock on bacterial translocation. *Crit. Care.med.* 18:529-36.
- Deschenes M and Villeneuve J. (1999):** development of bacterial infections in cirrhosis. *Am. J. Gastroenterol*, 94: 2193-97
- Dhiman R, Makharia C, Jain S, et al., (2000):** spontaneous bacterial peritonitis in fulminating hepatic failure. *J. Gastroenterol.* 98: 233-38.
- Dong Q, and Wright JR. (1996):** Expression of C-reactive protein by alveolar macrophages. *J Immunol*; 156:4815–20.
- Doran JE, Mansberger AR and Rees AC. (1980):** Cold insoluble globulin enhanced phagocytosis of gelatinized targets by macrophages monolayers: a model system. *J. Reticuloendothelial Society*, 27:471-83
- Dunn DL, Bark RA, Knight NB, et al., (1985):** macrophages, peripheral neutrophils in bacterial clearance from the peritoneal cavity. *Infect. Immune*, 49:257-64
- El-Said H, Hendy O, El-Haddad OK and Mansour T: (2000):** Relationship of tumor necrosis factor- α , interleukin-6 and endotoxin with the development of renal impairment in cirrhotic patient with spontaneous bacterial peritonitis. *Sc. J. Az. Med. Fac. Girls*. Vol. 21, No. 1, January: 53-64.
- Engelmann L, Gundelach K, Pilz U and Werner M. (1996):** Procalcitonin (PCT) and its relationship to endotoxin (ETX) in sepsis. *Intens Care Med*; 22, suppl.3:333.
- Enguix A, Rey C, Concha A, et al., (2001):** Comparison of procalcitonin with C-reactive protein and serum amyloid for the early diagnosis of bacterial sepsis in critically ill neonates and children. *Intensive Care Med* ; 27: 211-215

- Erten N, Genc S, Besisik SK, et al., (2004):** The predictive outcome in febrile neutropenic patients. *J Chin Med Assoc*; 67: 217–221.
- Fauerholdt L, Schlichting P, Christensen E, et al., (1983):** Conversion of micronodular cirrhosis into macronodular cirrhosis. *Hepatology*: 3 ; 928.
- Feliu E, Gougerot M, Hobsim J. et al., (1977):** Blood polymorphonuclear dysfunction in patients with alcohol cirrhosis. *Eur. J. Clin. Invest.*, 7: 751-7.
- Fernandez J, Navasa M, Ruiz-del-Arbol L,et al., (2002):** Effects of spontaneous bacterial peritonitis (SBP) on systemic haemdynamic circulation in patients with cirrhosis. *J. Hepatol.* 34: 73.
- Fernandez Lopez A, Luaces Cubells C, et al., (2003):** Procalcitonin in pediatric emergency departments for the early diagnosis of invasive bacterial infections in febrile infants: results of a multicenter study and utility of a rapid qualitative test for this marker. *Pediatr Infect Dis J*;22:895–903.
- Finucci G, Tirelli M, Bellon S. et al., (1990):** Clinical significance of cholethiasis in patients with decompensated cirrhosis. *J. Clin. Gastroenterol.*, 12 : 538.
- Flores J, Asensio J, Arranz E, et al., (2003):** Serum PCT in children with sepsis:A comparison with CRP and neutrophil count. *PCCM* 4(2):190-195.
- Foreman MG, Mannino DM, Moss M.(2003):** Cirrhosis as a risk factor for sepsis and death: analysis of the National Hospital Discharge Survey. *Chest*; 124:1016 –20.
- Garcia Taso G. (2001):** Current management of the complication of Cirrhosis and portal hypertension: variceal hemorrhage, ascites and spontaneous bacterial peritonitis -*Gastroenterology*; 120: 726-748.
- Garcia-Taso G Albillos A and Barden GE. (1993):** Bacterial translocation in acute and chronic portal hypertension. *Hepatology*, 17: 1081-1085.
- Garcia-Taso G, Angulo P, Garcia C, et al., (1998):** The diagnostic and predictive value of ascites nitric oxide levels in patients with spontaneous bacterial peritonitis. *Hepatology* Vol. 28, No. 1: 17-21.

- Gendrel D, Assicot M, Raymond J, et al., (1996)** Procalcitonun as a marker for the early diagnosis of neonatal infection. *J Pediatrics* 573-128:570
- Gendrel D, and Bohuon C (1997)** Procalcitomn, a marker of bacterial infection. *Infection* 25: 133—134
- Gendrel D, Raymond J, Assicot M, et al., (1997a):** Measurement of procalcitonin levels in children with bacterial and viral meningitis. *Clin Infect Dis*;24:1240-`1242.
- Geppert A, Steiner A, Delle-Karth G, et al., (2003):** Usefulness of procalcitonin for diagnosing complicating sepsis in patients with cardiogenic shock. *Intensive Care Med*;29: 1384–89.
- Gines P, Andies C and Juan R. (2004):** Management of cirrhosis and ascites. *New England Journal of Medicine*, 350; 16, 1646- 52.
- Giron-Gonzalez JA, Rodriguez-Rames C, Elvira J, et at., (2001)** Serial analysis of serum and ascetic fluid levels of soluble adhesion molecular and chemokines in patients with SBP. *Clin Exp Immunol* 1 23: 56-6 1
- Grangé JD. (2004):** prevention and mangment of ascitic fluied infection. *Gastroenterol Clin Biol*; 28:B278-86.
- Groszmana RJ. (1994):** Hyperdynamic circulation of liver diseases 40 years later: pathophysiology and clinical consequences. *Hepatology*; 20:1359-1363.
- Guarner C and Runyon BA (1995):** Spontaneous bacterial peritonitis: pathogenesis, diagnosis and management. *Gastroenterology*, 3: 311-328.
- Guarner C and Soriano C. (1997):** Spontaneous bacterial peritonitis. *Semin liver Disease*; 17: 203.
- Guarner C, Sola R, Soriano G, et al., (1999):** Risk of first community acquired spontaneous bacterial peritonitis in cirrhotics with low ascitic fluid protein levels. *Gastroenterology*;117:414-9.
- Guarner C and Soriano G. (2005):** Bacterial translocation and its consequences inpatients with cirrhosis. *Eur J Gastroenterol Hepatol*; 17:27–31.

- Guarner C, Soriano G, Totnas A, et al., (1993):** Increased serum nitrite oxid and nitrate levels in patients with cirrhosis: relationship to endotoxemia. *Hepatology* 18, 1139-1143.
- Habib M, Mohamed M K, Abdel-Aziz F. et al., (2001):** Hepatitis C virus infection in a community in the Nile Delta: Risk factors for seropositivity. *Hepatology* Jan; 33 (1) : 248-53.
- Hallak A. (1989):** Spontaneous bacterial peritonitis. *Am. J. Gastroenterol.*, 84 : 3459.
- Hallgren R, Lundgust G, Sedin G, et al., (1992):** Ascitic fluid ferritin. *Trop. Georg. Med.*, 39: 137-43.
- Hasan M M, Zaghloul A S, El-serag H.B, et al., (2001):** The role of hepatitis C in hepato cellular carcinoma: a case control study among Egyptian patients. *J. Clin. gastroentral*; 33 (2) : 123-6.
- Hassener A, Klettery, and Schlagf D. (1991):** Impaired monocyte function in cirrhosis. *Br Med J*: 282: 1262 -1274.
- Hay JA, Cokerill FB and Kase D. (1996):** Clinical comparison of isolator septi-check, non vented tryptic soy broth, and direct agar planting combined with thioglycolate broth for diagnosis of spontaneous bacterial peritonitis . *journal of clinical microbiology*;34(1)34-37.
- Heathcote J. (2000):** Liver cirrhosis: In: *Gastroenterology, the basise of disease and an approach to management* 4th edition, Jworobetz. R. J., Hilsden, E. A., Shaffer (eds), Copyright Astra Zeneca C and a: Inc PP 520-524.
- Henriksen J, Lassen N, Parving H, et al., (1980):** Main transport mechanism of protein exchange between plasma and the peritoneal cavity in hepatic cirrhosis *Invest.* 40 : 305-13.
- Herrmann W, Ecker D, Quast S (2000):** Comparison of procalcitonin, sCD14 and interleukin-6 values in septic patients. *Clin Chem Lab Med*; 38:41–46
- Ho H, Zuckerman M, et al., (1996):** infections in community acquired spontaneous bacterial peritonitis *Am. J. Gastronenterol.*, 91: 735-42.
- Hoefs JC (1990):** Spontaneous bacterial peritonitis prevention and therapy. *Hepatology*, 1 2 : 776-8 1.
- Hoefs JC, and Runyon BA, (1985):** Spontaneous bacterial peritonitis *Disease AMonth*;31: 1-48.

- Hoefs JC, Canawati HN and Sapico EL. (1982):** Spontaneous bacterial peritonitis. *Hepatol.* 2: 339.
- Hoffmann O, Reuter U, Masuhr F, et al., (2001):** Low sensitivity of serum procalcitonin in bacterial meningitis in adults. *Scand J Infect Dis*; 33: 215-218
- Husova L, Husa P, SenkyrikM and Lata J. (2004)** Procalcitonin as an indicator of infection in patients with liver cirrhosis. *Vnitr lek.*50(2):153-6.
- Jabs WJ, Logering BA, Gerke P, et al.,(2003):** The kidney as a second site of human C-reactive protein formation in vivo. *Eur J Immunol* ;33:152–61.
- Jaun Rodés (2001):** Diagnosis, Treatment and prevention of spontaneous bacterial peritonitis, Pan American congress conference, Lima, Peru.
- José B, López S, David P et al., (2006):** Procalcitonin is not sufficiently reliable to be the sole marker of neonatal sepsis of nosocomial origin Procalcitonin is not sufficiently reliable to be the sole marker of neonatal sepsis of nosocomial origin *BMC Pediatrics*, 6:16 doi: 10.1186/1471-2431-6-16
- Kamal SM, Farag DM, Sakar MA, et al., (1995):** the dignostic signfance of ascitic fluid ferritin. *Eygpt. J. Med. lab. Sci*, 4:9-15.
- Kamal SM, Rasenack JW, Bianchi L, et al., (2001):** Specific cellular immune response and cytokine patterns in patients coinfectd with hepatitis C virus and schistosoma mansoni. *J. Infect Dis.* 1; 184: 972-982.
- Karzai W, Oberhoffer M, Meier-Hellmann A, et al., (1997):** Procalcitonin-a new indicator of the systemic response to severe infections. *Infection*; 25:329 –334
- Konig W, Schonfeld M, Raulf M., et al., (1990):** The neutrophil leukotrienres role in health and disease. *Eiicosanoids*, 3:1-22
- Korczowski B (2006)** serum procalcitonin concentration in children with liver disease *The Pediatric Infectious Disease Journal* Volume 25, Number 3, 268-269.
- Korczowski B and Szybist W. (2004):** Serum procalcitonin and C-reactive protein in children with diarrhoea of various aetiologies. *Acta Paediatr*; 93:169–173.

- Kowaiski HJ and abdelmann WH (1953):** Cardiac output in cirrhosis. J Clin invest; 32:1356-1358.
- Kretzschmar M, Kruger A and Schirrmeister W. (2001):** Procalcitonin following elective partial liver resection: origin from the liver? Acta Anaesthesiol Scand;45:1162–1167.
- Lacour AG, Gervaix A, Zamora SA, et al.,(2001):** Procalcitonin, IL-6, IL-8, IL-1 receptor antagonist and C-reactive protein as identifications of serious bacterial infections in children with fever without localising signs. Eur J Pediatr ; 160: 95-100
- Lapillonne A, Basson E, Monneret G, et al., (1998):** Lack of specificity of procalcitonin for sepsis diagnosis in premature infants. Lancet; 351: 1211-1212
- Larcher UF, Wyke RJ and Moat AP. (1992):** bacterial and fungal infection in children fulminant hepatic failure, possible role of opsonization and complement deficiency. Gut: 23:1037-43
- Lars-Olof H et al., (1997):** Current Opinion in infectious diseases 10: 196-201.
- Le Moine O, Deviere J, Devaster JM, et al., (1994):** Interleukin 6: An early marker of bacterial infection in decompensated cirrhosis. J Hepatol;20:819 –24.
- Le Moullec JM, Jullienne A, Chenais J, et al., (1984):** The complete sequence of human preprocalcitonin. FEBS; 167:93-97.
- Lee F Y. (2003):** Cardiac dysfunction in spontaneous bacterial peritonitis: a manifestation of cirrhotic cardiomyopathy. Hepatology. November: 1089-1091.
- Liach J, Rimola A and Navasa M. (1992):** Incidence and predictive factors of first episode of SBP in cirrhosis with ascites. Hepatology, 16 (3):724-27.
- Liovet JM, Rodriguez-Iglesias P, Moitinho E, et al (1997):** Spontaneous bacterial peritonitis in patients with cirrhosis undergoing selective intestinal decontamination. J, hepatol, 26:88-95
- Liu H and Lee SS (2002):** TNF α in cirrhotic cardiomyopathy. J .hepatology ; 36(supp1):1.

- Ljubici N, Bilic A and Kopjar B (1994)** :Diuretics versus paracentesis followed by diuretics in cirrhosis effect on ascetic opsonic activity and imunoglobulin and complement concentrations, *Hepatology*, 19: 346-53.
- Loannis S. Elefsiniotis, Michael Skounakis, et al., (2006)**: Clinical significant of serum procalcitonin in acute or chronic liver diseases *Eur Gastenterol Hepatol*, 18(5):525-30
- Lorrot M, Moulin F, Coste J, et al., (2000)**: Procalcitonin in pediatric emergency situations: Comparison with C-reactive protein, interleukin-6, and alpha interferon for differentiating bacterial and viral infections. *Presse Medicale*; 29: 128-134
- Luyt CE, Guerin V, Combes A, et al. (2005)**: Procalcitonin kinetics as a prognostic marker of ventilator-associated pneumonia. *Am J Respir Crit Care Med* 2005; 171:48–53.
- Luzzani A, Polati E, Dorizzi R, et al., (2003)**: Comparison of procalcitonin and C-reactive proteina s markers of sepsis. *Crit Care Med*; 31:1737-41.
- Mal F, huu TP and Benahou M (1991)** chemoattractant and opsonic activety in ascitic fluid. *J. hepatology*, 12:45-49.
- Mansor MA, Hilmy AZ, Hady H, et al., (1997)**: factors perdicting the incidence of SBP in cirrhotic patients wih ascites. *The new Egyptian jornal of medcine*, 16:353-57.
- Marquette D, Molanar J, Yamada K, et al., (1981)**: phagocytosis promoting activity of plasma and fibroblastic cell surface fibronectins. *Molecular cellular biochemistery*, 36:147-55.
- Martin GS, Mannino DM, Eaton S, Moss M. (2003)**: The epidemiology of sepsis in the United States from 1979 through 2000. *N Engl J Med*; 348:1546–54.
- Martin M, Selberg O, Hecker H, et al., (2001)**: Discrimination of sepsis and systemic inflammatory response syndrome by determination of circulating plasma concentrations of procalcitonin, protein complement 3a, and interleukin-6. *Crit Care Med*; 28:2793–8.
- Martinez –Bru C, Gomez C, Cortes M, et al., (1999)**: Ascitic fluied interleukines-8 to distinguish SBP from steril ascites in cirrhotic patients. *Clin. Chim*, 45:2027-28

- Maruna P, Nedelnikova K and Gurlich R. (2000):** Physiology and genetics of procalcitonin. *Physiol Res*; 49: S57-S61
- Mastuda M, Yamanaka T and Mastuda A. (1982):** distribution of fibronectin in plasma and liver disease. *Clin.chim. Acta*, 118:191.
- Meisner M (2000):** procalcitonin (PCT) textbook 3rd edition by Michael Meisner, <http://www.procalcitonin.com>
- Meisner M, Brunkhorst FM, Reith HB, et al., (2000a):** Clinical experiences with a new semi-quantitative solid phase immunoassay for rapid measurement of procalcitonin. *Clin Chem Lab Med*; 38: 989-995
- Meisner M, Muller V, Khakpour Z, et al., (2003):** Induction of procalcitonin and proinflammatory cytokines in an anhepatic baboon endotoxin shock model. *Shock* 19:187–90.
- Meisner M, Schmidt J, Huettner H, et al.,(2000b):** The natural elimination rate of procalcitonin in patients with normal and impaired renal function. *Intens Care Med* ; 26, suppl. 2:212-216.
- Meisner M, Tschaikowsky K, Palmaers T, et al.,(1997a)** Procalcitonin (PCT) and CRP: Comparison of plasma concentrations at different SOFA-scores during the course of sepsis and MODS. *Shock* 1997; 8:47.
- Meisner M, Tschaikowsky K, Schnabel S, et al., (1997b):** Procalcitonin - Influence of temperature, storage, anticoagulation and arterial or venous asservation of blood samples on procalcitonin concentrations. *Eur J Clin Chem Clin Biochem* 35(8):597-601.
- Meliconi R, Parracino O, Facchini A, et al.,(1988):** Acute phase proteins in chronic and malignant liver diseases. *Liver* 8:65–74.
- Mellencamp MA and perheim (1992):** effects of cirrosis on bacterima and capsular antigenemia during experimental pneumococal pneumonia. Proceeding of the 26th interscience conferance on antimicrobial agents and chemotherapy.
- Merli M, Righio O, Romiti A. et al., (1990):** Basal energy production rate and substrate use in stable cirrhotic patients *Hepatology*, 12: 106.
- Mesquita RC, Leite-Mor MM. and Parise ER. (1997):** Fibronectin in the ascitic fluid of cirrhotic patients: correlation with biochemical risk factors for the development of spontaneous bacterial peritonitis. *Braz. J. Med: Biol. Resp.*, 30: 843-4

- Morgenthaler NG, Struck J, Chancerelle Y, et al.,(2003):** Production of procalcitonin (PCT) in nonthyroidal tissue after LPS injection. *Horm Metab Res* 35: 290–295.
- Morrison WL, Bouchier IAD, Gibson JNA. et al., (1990):** Skeletal muscle and whole body protein turn over in cirrhosis. *Clin. Sci.*, 78 : 631.
- Mowat C and Stanley A J (2001):** Review article: spontaneous bacterial peritonitis diagnosis, treatment and prevention. *Aliment Pharmacol Ther.* 15: 1851-1859.
- Muller B. et al., (2000):** calcitonin precursors are reliable markers of sepsis in medical intensive care unit. *Crit, Care Med.* 28 (4): 977-983
- Munoz P, Simarro N, Rivera M, et al., (2004):** Evaluation of procalcitonin as a marker of infection in a nonselected sample of febrile hospitalized patients. *Diagn Microbiol Infect Dis*; 49:237–241.
- Navasa M, Folio A, Liovet J, Clemente G, et al., (1996):** Randomized, comparative study of oral ofloxacin versus intravenous cefotaxime in spontaneous bacterial peritonitis. *Gastroenterology* 111: 1011—1017
- Navasa M, Follo A, Filella X, et al., (1998):** Tumor necrosis factor and interleukin-6 in spontaneous bacterial peritonitis in cirrhosis:relationship with the development of renal impairment and mortality. *Hepatology* 27: 1227-1232.
- Navasa M and Rodes J. (2004):** Bacterial infections in cirrhosis. *Liver Intern*; 24:277–280.
- Nijsten MW, Olinga P, The TH, et al., (2000):** Procalcitonin behaves as a fast responding acute phase protein in vivo and in vitro. *Crit Care Med*;28:458–461.
- Nooman Z, Serwah A, Attia A, et al., (1999):** determination of the prevalence and risk factors of SBP in chronic liver diseases. *Egypt .j. lab. Med.* Vol. 11 no.2 :451-476
- Nylen E, Muller B, Snider R, et al., (1999):** Pathophysiological significance of calcitonin precursors in sepsis and systemic inflammation. *Shock*, 12 Suppl.:14.
- Nylen E, Snider R, Thompson KA,et al.,(1996):** Pneumonitis-associated hyperprocalcitoninemia. *Am J Med Sci*, 312:12-18.

- Oberhoffer M, Bgel D, Meier-Hellmann A, et al., (1996a):** Procalcitonin is higher in non-survivors during the clinical course of sepsis, severe sepsis and septic shock. *Intens Care Med*; 22:A245.
- Oberhoffer M, Bitterlich A, Hentschel T, et al., (1996b):** Procalcitonin (ProCT) correlates better with the ACCP/SCCM consensus conference definitions than other specific markers of the inflammatory response. *Clin Intens Care* 7, suppl.1:46.
- Oberhoffer M, Karzai W, Meier-Hellmann A, et al., (1999a):** Sensitivity and specificity of various markers of inflammation for the prediction of TNF-a and IL-6 in patients with sepsis. *Crit Care Med* 27(9):1814-1818.
- Oberhoffer M, Stonans I, Russwurm S, et al., (1999b):** Procalcitonin expression in human peripheral blood mononuclear cells and its modulation by lipopolysaccharides and sepsis related cytokines in vitro. *J Lab Clin Med* 134:49-55.
- Ortiz J, Coll S, Vila M, et al., (1997):** Continuous versus in patient prophylaxis of the first episode of spontaneous bacterial peritonitis with norfloxacin. *Hepatology* ;25:532–536.
- Pagliaro L. et al., (1983):** Percutaneous blind biopsy versus laparoscopy with guided biopsy in diagnosis of cirrhosis: a prospective randomized trial. *Dig. Dis.* 28: 39.
- Panichi V, Migliori M, De Pietro S, et al., (2001):** C reactive protein in patients with chronic renal diseases. *Ren Fail* 23:551– 62.
- Pecile P, Miorin E, Romanello C, et al., (2004):** Procalcitonin: a marker of severity of acute pyelonephritis among children. *Pediatrics*; 114:e249–e254.
- Peres-Bota D, Melot C, Lopes Ferreira F, Vincent JL. (2003):** Infection probability score (IPS): a simple method to help assess the probability of infection in critically patients. *Crit Care Med.*31:2579–84.
- Perez-Ruiz M, Ros J, Morales-Ruiz M, et al., (1999):** Vascular endothelial growth factor production in peritoneal macrophages of cirrhotic patient regulation by cytokines and bacterial lipopolysaccharide. *Hepatology*; 29:1057-1063.

- Petitjean S and Assicot M (1993):** immunoreactivite calcitonine-like au cours des processus infectieux. Diplome d'etudes approfondies de biotechnologie, Universit Paris V:1-29.
- Pinzello G, Simonetti R and Cammac C. (1993):**SBP, update gastroentrole. 6:54-60
- Pittet D, Rangel-Frausto MS, Costigan M, t al., (1995):** The natural history of the systemic inflammatory response syndrome (SIRS). JAMA; 273:117-23.
- Powers w (1981):** cerebrospinal fluied to serum glucose ratio in diapietes mellitus and bacterial meningitis. Am. J. med, 71:217-20
- Prieto M, Gomez-lechon MJ, Hoyos M, et al., (1986):** fibronectin of ascitic fluid a potentially important protective mechanesm against SBP. J. Hepatol, 3 (suppl.1): S 154.
- Propat T, Propst A, Herold M, Schauer G, et al., (1993)** Spontaneous bacterial peritonitis is associated with high levels of interleukin-6 and its secondasy mediators in ascitic fluid. J. Clin Invest 23: 832-836
- Rajkovik LA, Yosif-kadran AGM, and Wyke (1990):** PMN cell locomotion and aggregation in patients with alcoholic liver diseases. clin exp immunol, 58:654
- Rau B, Steinbach G, Gansauge F, Mayer JM, et al., (1997)** The potential role of procalcitonrn and interleukin 8 in the prediction of infected necrosis in acute pancreatis. Gut 6: 832-838
- Richardet JP, Beaugrand M (1991)** Spontaneous bacterial peritonitis in cirrhotic patient. Gastroenterol Clin Biol 15: 239—249
- Ricart E, Soriano G, Novella M T, et al., (2000):** Amoxicilin-clavulanic acid versus cefotaxime in the bacterial infection in cirrhotic patients. Journal of Hepatology 32: 596-602.
- Ridker P (2003):** Clinical application of C-reactive protein for cardiovascular disease detection and prevention. Circulation ; 107:363–9.
- Rimola A, Bory F, Teres J, et al., (1984):** Oral nonabsorbable antibiotics prevent infection in cirrhotics with gastrointestinal hemorrhage. Hepatology,5:463-7.

- Rimola A, Garcia-Taso G, Navasa M, et al., (2000):** Diagnosis, treatment and prophylaxis of spontaneous bacterial peritonitis: a consensus document *Journal of Hepatology*: 142- 32 153
- Rimola A, Navasa M, and Arroyo V. (1995):** Experience of cefotaxime in the treatment of spontaneous bacterial peritonitis in cirrhosis. *Diag. Microbiol. Infect. Dis.*, 22: 14 1-5.
- Rohner P, pepey B, and Auckenthaler R. (1995):** Comparison of bacT/ALERT with signal blood culture system. *J. clin. Microbial* 33:142-153.
- Romero A, Perez-Arellano J L, Gonzalz-Villaron L et al., (1993):** Effect of transferrin concentration on bacterial growth in human ascitic fluid from cirrhotic and neoplastic patients. *Eur J. clin. Invest.*, 23 : 699-705.
- Ruiz-del-Arbol L, Urman J, Fernandez J and Gonzalez M. (2003):** Systemic, renal and hepatic hemodynamic derangement in cirrhotic patients with spontaneous bacterial peritonitis *Hepatology*, Vol. (38):No. 5: 1210- 1218.
- Runyon B A (1985):** Spontaneous bacterial peritonitis. *Diseases-a- Month*, 3 1: 1-45.
- Runyon B A (1986a):** Low protein concentration in ascitic fluid is predisposed to Spontaneous Bacterial Peritonitis. *Gastroenterology* 91:1346 -1343
- Runyon B A (1986b):** Opsonic activity of human ascitic fluid. *Hepatology*, 6: 546.
- Runyon B A (1988a):** Patients with deficient ascitic fluid opsonic activity are predisposed to spontaneous bacterial peritonitis. *Hepatology*, 8: 632-235.
- Runyon B A (1988b):** Spontaneous bacterial peritonitis an explosion of information. *Hepatology*, 8: 543-45.
- Runyon B A (1990):** Monomicrobial non-neutrocytic bacterascites: avariant of spontaneous bacterial peritonitis. *Hepatology*. 1 2: 7 1 0.
- Runyon B A (1994):**Care of patients with ascites. *N. Eng. J. Med.*, 42 33 0-3 7.
- Runyon B A (2003):** Strips and tubes improving the diagnosis of spontaneous bacterial peritonitis. *Hepatology*. Vol 37. No. 4:745-47.
- Runyon BA and Hoefs JC (1984a):** Culture- negative neutrotytic ascites: a variant of spontaneous bacterial peritonitis. *Hepatology* 4: 1209—1211

- Runyon BA and Hoefs JC (1984b):** Ascitic fluid analysis in differentiation of spontaneous bacterial peritonitis from gastrointestinal tract perforation into ascitic fluid. *Hepatology*. 4:447-50.
- Runyon BA and Hoefs JC, (1985):** ascitic fluid chemical analysis before during and after spontaneous bacterial peritonitis. *Hepatology*. 5: 257-59.
- Runyon BA, Morrissey R, Hoefs JC, and Wyle FA, (1985):** Opsonic activity of human ascitic fluid. A potentially important protective mechanism against spontaneous bacterial peritonitis . *Hepatology*, 5: 634-637.
- Runyon BA, Antillon MR and Montano AA (1989):** Effect of diuresis versus therapeutic paracentesis on ascitic fluid opsonic activity and serum complement. *Gastroenterology*, 97: 158-62.
- Runyon B A, Mchutchison J G, antillon M R et al. (1991a):** short-course versus long-course antibiotic treatment of spontaneous bacterial peritonitis A randomized controlled study of 100 patients. *Gastroenterology*, 100: 1737-42
- .
- Runyon BA, Such I(1998):** Spontaneous bacterial peritonitis. *Qin Infect Dis* 27: 669-674
- Rush FB, Sori A J, Murphy TF, et al. (1988):** Endotoxemia and bacteraemia during hemorrhagic shock. *Ann. Surgery*, 207:549-54.
- Ruswurm S, Stonans I, Stonane E, et al.,(2001):** Procalcitonin and CGRP-1 mRNA expression in various human tissues. *Shock* 16:109 –12.
- Sapey T, Kabissa D, Fort E, Laurin C, Mendler MH.,(2005):** Instant diagnosis of spontaneous bacterial peritonitis using leukocyte esterase reagent strips: Nephur-test vs Multistix SG. *Liver Int* 25:343-8.
- Sapey T, Mena E, Fort E, et al.,(2005):** Rapid diagnosis of spontaneous bacterial peritonitis with leukocyte esterase reagent strips in a European and in an American Center. *J Gastroenterol Hepatol* 20:187-92.
- Senger D R, Galli S J, Dvorak A, et al., (1983):** Tumors cells secrete a vascular permeability factor that promote accumulation of ascites fluid. *Science* 219: 983-985.

- Sheen I S and Liaw YF.(1989):**The prevalence and incidence of cholecystolithiasis in patients with chronic liver disease: a prospective study. *Hepatology*, 9 : 538.
- Sherlock S and Dooley J. (2002):** In diseases of the liver and biliary system. 11th Edt. Sherlock, S., and Dooley, J (eds) Blackwell scientific publications; united kingdom. Ch. 3, PP. 37-46, Ch. 8, PP. 111-126, Ch. 21 PP. 365-380 and Ch. 36, PP. 639-646.
- Shorvon P J, Eukyn S J, Cotton P B, et al., (1983):** Gastrointestinal instrumentations, bacteraemia and endocarditis. *Gut*, 24: 1078-93.
- Silvain Ch, Mannant PR and Ingrand P(1991):** SBP in cirrhose. *Gastroenterol Clin Biol* 15:106–109.
- Simmons R L and Ahrenholz DH (1981):** Pathology of peritonitis, a review. *J. Anti microb. Chemotherapy*, 7 (Suppl.A): 29.
- Simon L, Gauvin F, Amre DK, et al., (2004):** Serum procalcitonin and C-reactive protein levels as markers of bacterial infection: a systematic review and meta-analysis. *Clin Infect Dis*; 39:206–217.
- Siringo S, Burrough A K, Bolondi L. et al., (1995):** Peptic ulcer and its course in cirrhosis: an endoscopic and clinical prospective study. *J. Hepatol*; 22 : 633.
- Soriano G, Coll P, Guarner C, et al, (1995):** Esherichia Coil Capsular Polysaccharid and spontaneous Bacterial Peritonitis in Cirrhosis. *Hepatology* Vol. 21, NO. 3: 668-672.
- Sormunen P, Kallio MJ, Kilpi T, et al.,(1999):** C-reactive protein is useful in distinguishing Gram stain–negative bacterial meningitis from viral meningitis in children. *J Pediatr* 134:725–29.
- Spahr L, Morard I, Hadengue A, Vadas L, Pugin J.,(2001):** Procalcitonin is not an accurate marker of spontaneous bacterial peritonitis in patients with cirrhosis. *Hepatogastroenterology* 48:502–5.
- SQrensen HT, FriisS, Olsen J H, et al., (1998):** Risk of liver and other types of cancer in patients with cirrhosis: a nationwide cohort study in Denmark. *Hepatology* 28: 921.

- Strauss E, Aersa JP, (2004):** Alcoholic hepatitis: bad prognosis due to concomitant bacterial infections. *Rev Soc Bras Med Trop* 37:199–203.
- Strauss E, Gomes de Sa Ribeiro Mde F. (2003):** Bacterial infections associated with hepatic encephalopathy: prevalence and outcome. *Ann Hepatol* 2003; 2:41–45.
- Such I and Runyon BA (1998):** Spontaneous bacterial peritonitis. *Qin Infect Dis* 27: 669-674
- Such J, Barrios J, Enriquez J, et al., (1991):** Selective intestinal decontamination prevents spontaneous bacterial peritonitis. *Gastroenterology* 100:477–481.
- Tilg H, Wilmer A, Vogel W, et al., (1992):** Serum levels of cytokines in chronic liver diseases. *Gastroenterology* 103:264 –74.
- Tito L, Rimola A, Gines P, et al., (1988)** Recurrence of spontaneous bacterial peritonitis in cirrhosis: frequency and predictive factors. *Hepatology* 8: 27-31
- Thomas H C (1993):** Immunologic aspects of liver disease, In *diseases of the liver*, Seventh edition, edited by Schiff L and Schiff E R, Lippincott company Philadelphia PP. 65 1-3.
- Ugarte H, Silva E, Mercan D, et al., (1999):** Procalcitonin used as a marker of infection in the intensive care unit. *Crit Care Med* 27:498-504.
- Urman J, Fernandez J and Gonzalez M. (2003):** Systemic, renal and hepatic hemodynamic derangement in cirrhotic patients with spontaneous bacterial peritonitis *Hepatology*, Vol. (38):No. 5: 1210- 1218.
- Velicer CM, Heckbert SR, Lampe JW, et al., (2004):** Antibiotic use in relation to the risk of breast cancer. *JAMA*; 291:827–35.
- Viallon A, Lafond P, Venet C, Tardy B, et al (1999a):** Spontaneous bacterial peritonitis in cirrhotic patients: retrospective analysis of 72 cases. *Rean Urg* 8: 99—103
- Viallon A, Zeal F, Lambert C, Tardy B, et al (1999b)** High sensitivity and specificity of serum procalcitonin levels in adults with bacterial meningitis. *Clin infect Dis* 28 13 13-1316

- Viallon A, Zeni F, Pouzet V, et al., (2000):** Serum and ascitic procalcitonin levels in cirrhotic patients with spontaneous bacterial peritonitis: diagnostic value and relationship to proinflammatory cytokines. *Intensive Care Med*;26:1082– 1088.
- Wagner FD, Jonitz B, Potapov EV, et al., (2001):** Procalcitonin, a donor-specific predictor of early graft failure-related mortality after heart transplantation. *Circulation* 104:I192–I196.
- Wang S S, Tsai Y T, Lee S D, et al., (1991):** Spontaneous bacterial peritonitis in patients with hepatitis B related cirrhosis and hepatocellular carcinoma. *Gastroenterology*. 101: 1656-62.
- Weisiger RA. (1996):** Laboratory test in liver disease In: Cecil Textbook of Medicine, Bennett, J.C and Plum. F (eds), 20th edition W.B. Saunders Company, chapter 12, PP. 759-762.
- Whang KT, Vath SD, Nylén ES, et al., (1999):** Procalcitonin and proinflammatory cytokine interactions in sepsis. *Shock*; 12(4):265-273.
- Whicher J, Bienvenu J and Monneret G. (2001):** Procalcitonin as an acute phase marker. *Ann Clin Biochem*; 38:483–93.
- Wojtacha A, Juszczak J, Czarniak E, et al., (2004).** Spontaneous bacterial peritonitis in patients with decompensated liver cirrhosis based on bacteriological and biochemical results, *przegl Epidemiol*,58(4):597-607.
- Wong F, Bernardi M, Balk R, et al., (2005):** International Ascites Club. Sepsis in cirrhosis: report on the 7th meeting of the International Ascites Club. *Gut*; 54:718–725.
- World Health Organization (WHO) (1999):** WHO report on infectious disease: removing obstacles to healthy development. Geneva.
- World Health Organization (WHO) (2000):** WHO report on infectious disease: overcoming antimicrobial resistance. Geneva.
- Wrenger S, Kahne T, Bohuon C, et al., (2000):** Aminoterminal truncation of procalcitonin, a marker for systemic bacterial infections, by dipeptidyl peptidase IV CDP IV. *FEBS Lett*, 466(1): 155-15
- Wyke RJ (1987):** Problems of bacterial infection in patients with liver disease *Gut* 28: 453-8.

- Wyke RJ, Rajkovic LA, and William R. (1993):** Impaired opsonization of serum from patients with chronic liver disease. Clin Exp. Immunol; 51: 91-8.
- Yasojima K, Schwab C, McGeer EG, McGeer PL.(2000):** Human neurons generate C-reactive protein and amyloid P: upregulation in Alzheimer's disease. Brain Res 887:80–89.
- Zeni F, Tardy B, Vindimian M, et al., (1993):** high levels of tumor necrosis factor alfa and interleukin -6 in the ascitic fluid of cirrhotic patients with spontaneous bacterial peritonitis. Clinical Infectious Diseases, 17: 218-123. .
- Zeni F, Viallon A, Assicot M, et al., (1994):** Procalcitonin serum concentrations and severity of sepsis. Clin Intens Care suppl 2, 5: 89-98.