

REFERENCES

Abdelmalek M, Ludwig J, Lindor KD, et al.,(1995): Two cases from the spectrum of non alcoholic steatohepatitis. J Clin Gastroenterol;20:127-129.

Ahren B and Schmitz O, (2004) : GLP-1 receptor agonists and DPP-4 inhibitors in the treatment of type 2 diabetes. Horm Metab Res;36:867-876.

Alberti A, Vario A, Ferrari A, et al., (2005). Review article: Chronic hepatitis C-natural history and cofactors. Aliment Pharmacol Ther;22(Suppl 2):74-78.

Allison ME, Wreghitt T, Palmer CR , Alexander GJ., (1994): Evidence for a link between hepatitis C virus infection and diabetes mellitus in a cirrhotic population. J Hepatol;2(1):1135–1139.

Allison R, Damien J, Sandra T,et al.,(1999): The impact of diagnosis of hepatitis C virus on quality of life. Hepatology;305:1299-1301.

American Diabetes Association(2011): Diagnosis and classification of diabetes mellitus. Diabetes Care;3(4):54–59.

Arafa N, Hoseiny ME, Rekacewicz C, et al.,(2005): Changing pattern of hepatitis C virus spread in rural areas of Egypt. J Hepatol;43:418-424.

Aschner P, Kipnes MS, Lunceford JK, et al., (2006): Effect of the dipeptidyl peptidase-4 inhibitor sitagliptin as monotherapy on glycemic control in patients with type 2 diabetes. Diabetes Care; 29:2632–2637.

Asselah T, Rubbia-Brandt L, Marcellin P,et al.,(2006): Steatosis in chronic hepatitis C: Why does it really matter? Gut;55:123-130.

Aytug S, Reich D, Sapiro LE, et al.,(2003): Impaired IRS-1/P13-Kinase signaling in patients with HCV: A mechanism for increased prevalence of type2 diabetes. Hepatology;38;1384-1392.

Bailey CJ and Turner RC,(1996): Metformin. N Eng J Med;334:574-579.

Banerjee S, Saito K, Ait-Goughoulte M, et al.,(2008): Hepatitis C virus core protein up regulates serine phosphorylation of insulin receptor substrate-1 and impairs the downstream akt/protein kinase B signaling pathway of insulin resistance. J Virol;82:2606-2612.

REFERENCES

Bigam DL, Pennington JJ, Cerbentier A, et al.,(2000): Hepatitis C related cirrhosis: A predictor of diabetes after liver transplantation . Hepatology;32:87-90.

Blanton RE, Salam SE, Kariuki HC.et al., (2002):Population-based differences in Schistosoma mansoni-and hepatitis C-induced disease. J Infect Dis;185:1644–1649.

Burban SD, Mostafa KM, Bernard L, et al.,(2006): Expected increase in hepatitis C-related mortality in Egypt due to pre-2000 infection. J H; 44:455-461.

Cammá Calogero, Savino Bruno, Vito Di Marco, et al., (2006): Insulin resistance is associated with steatosis in non diabetic patients with genotype 1 chronic hepatitis C . Hepatology ;43:64-71.

Caronia S, Taylor K, Pagliaro L, et al.,(1999): Further evidence for an association between non-insulin dependent diabetes mellitus and chronic hepatitis C virus infection. Hepatology;30:1059-1063.

Carrascosa M, Pascual F, Aresti S, et al.,(1998): Acarbose-induced acute severe hepatotoxicity. Lancet;349:698.

Centers for Disease Control and Prevention(2008): Hepatitis B virus frequently asked question, division of viral hepatitis for health professionals July 21,2008.

Chalasani N, Aljadhey H, Kesterson J, et al.,(2004): Patients with elevated liver enzymes are not at higher risk for statin hepatotoxicity. *Gastroenterology*;126:1287-1292.

Chang KM, Thimme R, Melpoder JJ, et al.,(2001): Differential CD4(p) and CD8(p) T-cell responsiveness in hepatitis C virus infection. *Hepatology*;33: 267–276.

Chehadeh W, Abdella N, Ben-Nakhi A, et al.,(2009): Risk factors for the development of diabetes mellitus in chronic hepatitis C virus genotype 4 infection. *J. Gastroenterol. Hepatol.*; 24: 42-8.

Chen HF, Li CY, Chen P,et al (2006): Sero-prevalence of hepatitis B and C in type 2 diabetic patients. *J Chin Med Assoc*;69:146–198.

Chen LK, Hwang SJ, Tsai ST, et al.,(2003): Glucose intolerance in Chinese patients with chronic hepatitis C. *World J Gastroentrol*;9:505-513.

REFERENCES

Chevaliez S, Pawlotsky JM,(2008): Diagnosis and management of chronic viral hepatitis:antigens,antibodies and viral genomes. Best Pract Res Clin Gastroenterol;22:1031-1048.

Chiba T, Matasuzaki Y, Abei M, et al., (1996): Multivariate analysis of risk factors for hepatocellular carcinoma in patients with hepatitis C virus related liver cirrhosis. J Gastroenterol;31:552-558.

Choudhury S, Hirschberg Y, Filipek R, et al.,(2000): Single dose pharmacokinetics of nateglinide in subjects with hepatic cirrhosis. J Clin Pharmacol;40:634-640.

Chu Cj, Lee SD, Hung TH,et al.,(2009): Insulin resisistance is a major determinant of sustained virological response in genotype 1 chronic hepatitis C patients receiving peg-interferon alpha2b plus ribavirin .Aliment Pharmacol Ther;29:46-54.

Conjeevaram H, Burant CF,McKenna, et al.,(2008): A randomized double-blind, placebo-controlled study of PPAR-gamma agonist pioglitazone given in combination with peginterferon and ribavirin in patients with genotype -1 chronic hepatitis C. Hepatology;48:384A.

REFERENCES

Cooper S, Erickson AL, Adams EJ, et al.,(1999): Analysis of a successful immune response against hepatitis C virus. *Immunity*;10:439–449.

Darwish MA, Khalil AH, Yassin MM, et al.,(2005): Prevalence of hepatitis C virus and hepatitis B virus antibodies among intravenous drug addicts and the associated risk factors. *Egypt J Med Lab Sci*;14(2).

Davis GL, Wong JB, Mc Hutchison JG, et al.,(2003): Early virological response to treatment with peg interferon alfa-2b plus ribavirin in patients with chronic hepatitis C. *HEPATOLOGY*;38: 645-652.

Defronzo R, Hissa M, Garber A, et al(2009): The efficacy and safety of saxagliptin when added to metformin therapy in patients with inadequately controlled type 2 diabetes with metformin alone. *Diabetes Care*; 32:1649–1655.

Douglas MW, George J,(2009): Molecular mechanisms of insulin resistance in chronic hepatitis C. *W J G*;15:4356-4364.

Egyptian National Control Strategy For Viral Hepatitis.,2008-2012 : Arab republic of Egypt, Ministry of Health and Population. National

Committee for the Control of Viral Hepatitis, April 2008.

EL-Gaafary MM, Rekacewicz C, Abdel-Rahman AG, et al.,(2005):Surveillance of acute hepatitis C in Cairo. J Med Virol;76:520-525.

ELgouhari HM, Zein CO, Hanouneh I, et al., (2009): Diabetes mellitus is associated with impaired response to antiviral therapy in chronic hepatitis C infection. Dig Dis Sci, doi:10.1007/s10620-008-0683-2.

El-Hawary E-I, Gamal F, Mai A El-Daly et al.,(2011): Association of HCV with Diabetes Mellitus: an Egyptian case-control study. Virology Journal; 8:367-376.

EL-Refaei M, EL-Sheikh N, Kamal K et al.,(2004): Analysis of T-cells responses against hepatitis C. J Hepatol.;40:31-38.

El-Serag HB, Richardson PA, Everhart JE, et al.,(2001):The role of diabetes in hepatocellular carcinoma. A case-control study among United States Veterans. American Journal of Gastroenterology;96:2462-2467.

REFERENCES

EL-Zayadi AR, Selim OE, Hamdy H, et al., (1998): Association of chronic hepatitis C virus infection and diabetes mellitus. Trop Gastroentrol;19:141-145.

EL-Zayadi AR, Mahmoud Anis ., (2012): Hepatitis C virus induced insulin resistance impairs response to antiviral therapy.WJG;18:212-223.

Ferenci P, Fried MW, Shiffman ML, et al.,(2005): Predicting sustained virological responses in chronic hepatitis C patients treated with peg interferon alfa-2a /ribavirin. J Hepatol;43:425-433.

Fried MW, Shiffman ML, Reddy KR, et al.,(2002): Peg interferon alfa-2a plus ribavirin for chronic hepatitis C infection. N Engl J Med;347:975-982.

Fukui M, Kitagawa Y, Nakamura N, et al.,(2003): Hepatitis C virus and atherosclerosis in patients with type2 diabetes. Journal of American Medical Association;289:1245-1246.

Fytili P, Tiemann C, Wang C, et al.,(2007): Frequency of very low HCV vireamia detected by a highly sensitive HCV RNA assay. J Clin Virol;39:308-311.

REFERENCES

Gad M, Tanaka E, Orie K. et al.,(2001): Relationship between hepatitis C virus infection and schistosomal liver disease: not simply an additive effect. *J Gastroenterol*;36: 753–758.

Gentile S, Turco S, Guarino G, et al.,(2001):Effect of treatment with acarbose and insulin in patients with non-insulin-dependent diabetes mellitus associated with non-alcoholic liver cirrhosis. *Diabetes Obes Metab*;3:33-40.

Ghany MG, Strader DB, Thomas DL, et al.,(2009):Diagnosis, management, and treatment of hepatitis C: an update. *Hepatology*;49:1335-74.

Giordanino C, Bugianesi E, Smedile A, et al.,(2008): Incidence of type 2 diabetes mellitus and glucose abnormalities in patients with chronic hepatitis C infection by response to treatment. *Am J Gastroenterol*;103:2481-7.

Guidi M , Muratori P , Granito A , et al.,(2007): Hepatic steatosis in chronic hepatitis C: impact on response to anti-viral treatment with peg-interferon and ribavirin. *Alimentary Pharmacology & Therapeutics*;22:943-949.

REFERENCES

Hadziyannis SJ, Sette HJ ,Morgan TR, et al.,(2004): Peginterferon-alpha2a and ribavirin combination therapy in chronic hepatitis C: a randomized study of treatment duration and ribavirin. *Ann Intern Med*;140:346-355.

Halim A-B, Garry RF, Srikanta D, et al., (1999): Effect of schistosomiasis and hepatitis on liver disease. *Am J Trop Med Hyg*;60:915–920.

Holst JJ and Gromada J,(2004): Role of incretin hormones in the regulation of insulin secretion in diabetic and nondiabetic humans. *Am J Physiol Endocrinol Metab*.;287:E199- E206.

Hu KQ, Kyulo NL, Esrailian A, et al.,(2004): Overweight and obesity, hepatic steatosis, and progression of chronic hepatitis C : A-retrospective study on a large cohort of patients in the united states . *J Hepatol*;40:147-154.

Huang RH, Hu KQ,(2007): A practical approach to managing patients with HCV infection. *Int J Med Sci*; 32:63-68.

Jacobson IM, Brown RS, Freilich B, et al., (2007): Peg-interferon alfa2b and weight-based or flat-dose ribavirin in chronic hepatitis C patients: a randomized trial *Hepatology*;46:971-981.

Jasonek J ,Kacprzak-Bergman I, Zaleska I, et al.,(2006): The treatment of HCV infection with interferon alpha and ribavirin in a child with diabetes type1. *Przegl Epidemiol*;602:259-322.

Jensen DM, Morgan TR, Marcellin P, et al.,(2006): Early identification of HCV genotype 1 patients responding to 24 weeks peg interferon alpha-2a /ribavirin therapy. *HEPATOLOGY*;43:954-960.

Kamal S.M., Nasser I.A.,(2008): Hepatitis C genotype: What we know and what we don't know. *Hepatology*;47:1371-1383.

Kamal S, Bianchi L, Al Tawil A. et al.,(2001a): Specific cellular immune response and cytokine patterns inpatients co-infected with hepatitis C virus and *Schistosoma mansoni*. *J Infect Dis*;184:972–992.

Kamal S, Rasenack J, Bianchi L. et al., (2001b): Acute hepatitis C without and with schistosomiasis: correlation with hepatitis C-specific CD4(p) T-cell and cytokine response. *Gastroenterology*;121:646–656.

Kamal S.M., M. A. Madwar, T. Peters, et al.,(2000): Interferon therapy in patients with chronic hepatitis C and schistosomiasis. *J. Hepatol.* 32:172-174.

REFERENCES

Kang H, Greenson JK, Omo GT, et al.,(2006): Metabolic syndrome is associated with greater histological severity, higher carbohydrate, and lower fat diet in patients with NAFLD. *Am J Gastroenterol*;101:2247-2253.

Kawaguchi T, Yoshida T, Harada M, et al.,(2004): Hepatitis C virus down-regulates insulin receptors substrate 1 and 2 through up regulation suppressors of cytokines signaling 3. *Am J Pathol*;165:1499-1508.

Kawaguchi T, Ide T, Taniguchi E, et al.,(2007): Clearance of hepatitis C virus improve insulin resistance, beta-cell function, and hepatic expression of insulin receptor substrate 1 and 2. *Am J Gastroenterol*;102:570-576.

Khalili M, Lim JW, Bass N, et al.,(2004): New onset diabetes mellitus after liver transplantation. The critical role of hepatitis C infection. *Liver Transpl*;10:349-355.

Kiyici M, Gulten M, Gurel S, et al.,(2003): Ursodeoxycholic acid and atorvastatin in the treatment of nonalcoholic steatohepatitis. *Can J Gastroenterol*;17:713-718.

Kobayashi S, Takeda T, Enomoto M, et al.,(2007): Development of hepatocellular carcinoma in patients with chronic hepatitis C who had

a sustained virological response to interferon therapy: a multi- center, retrospective cohort study of 1124 patients. *Liver Int*; 27:186-191.

Konishi I, Horiike N, Hiasa Y, et al (2007): Diabetes mellitus reduces the therapeutic effectiveness of interferon –alpha2b plus ribavirin therapy in patients with chronic hepatitis C. *Hepatol. Res*;37:331-338.

Koziel M, Dudley D, Afdhl N, et al.,(1995): HLA class I-restricted cytotoxic T lymphocytes specific for hepatitis C virus. Identification of multiple epitopes and characterization of patterns of cytokine release. *J Clin Invest*;96:2311–2321.

Larrey D, Babany G, Bernuau J, et al.,(1990): Fulminant hepatitis after lisinopril administration . *Gastroenterology*; 99:1832-1833.

Lau JYN, Davis GL, Kniffen J et al..(2000): Significance of serum hepatitis C virus RNA levels in chronic hepatitis C. *Lancet*;34(1):1501–1504.

Lechner F, Wong DK, Dunbar PR, et al.,(2000): Analysis of successful immune responses in persons infected with hepatitis C virus. *J Exp Med*;191: 1499–1512.

REFERENCES

Lecube A, Hernandez C, Genesca J, et al.,(2004): High prevalence of glucose abnormalities in patients with hepatitis C virus infection: A multivariate analysis considering the liver injury. *Diabetes Care*; 27: 1171-1175.

Lecube A, Hernandez C, Genesca J, et al.,(2006): Glucose abnormalities in patients with hepatitis C virus infection epidemiology and pathogenesis. *Diabetes Care*;29:1140-1149.

Leonard M, Seeff (2004): Natural history of chronic hepatitis C. *Hepatology*;36(5):S35-S46.

Liang TJ, Rehermann B, Seeff LB, et al.,(2000): Pathogenesis, natural history, treatment, and prevention of hepatitis C. *Ann Intern Med*; 132:296-305.

Manns MP, Mc Hutchison JG, Gordon SC, et al.,(2001): Peg interferon alfa-2b plus ribavirin compared interferon alfa-2a plus ribavirin for initial treatment of chronic hepatitis C: A randomised trial. *Lancet*;358:958-965.

Mason AL, Lau JY, Hoang N, et al.,(1999): Association of diabetes mellitus and chronic hepatitis C virus infection. *Hepatology*; 29: 328-33.

Mayo MJ(2002): Extrahepatic manifestations of hepatitis C infection. The American Journal of the Medical Sciences;32(5):135-148.

Mehta SH, Brancati FL, Sulkowski MS et al.,(2000): Prevalence of type 2 diabetes mellitus among persons with hepatitis C virus infection in the United States. Ann Intern Med; 13(3): 592–599.

Mehta SH, Strathdee SA, Thomas DL, et al.,(2001): Association between hepatitis C virus infection and diabetes mellitus. Epidemiol Rev;23(2):302-312.

Mehta SH, Brancati FL, Strathdee SA, et al., (2003) : Hepatitis C virus infection and incident type 2 diabetes. Hepatology;38:50-56.

Missale G, Bertoni R, Lamonaca V, et al.,(1996): Different clinical behaviors of acute hepatitis C virus infection are associated with different vigor of the anti-viral cell-mediated immune response. J Clin Invest;98:706–714.

Miyanari Y, Atsuzawa K, Usuda N, et al.,(2007): The lipid droplet is an important organelle for hepatitis C virus production. Nat Cell Bio;9: 1089-1097.

REFERENCES

Mohamed MK(2004): Epidemiology of HCV in Egypt. Afro-Arab Liver J ;32:41-52.

Mohamed MK, Abdel-Hamid M, Mikhail NN, et al.,(2005):Intrafamilial transmission of hepatitis C in Egypt. Hepatology; 42(3):683-687.

Mohamed MK, Magder LS, Abdel-Hamid M, et al.,(2006): Transmission of hepatitis C virus between parents and children. Am J Trop Med Hyg ;75(1):16-20.

Moscatiello S, Manini R, Marchesini G, et al.,(2007): Diabetes and liver disease: An ominous association . Nutrition, Metabolism & Cardiovascular Diseases;17:63-70.

Nafeh M.A., A. Medhat, M. Shehata, et al ., (2005): Hepatitis C in a community in Upper Egypt: I. Cross-sectional survey. Am. J. Trop. Med. Hyg; 63:236-241.

Nair S, Diehl AM, Wiseman M, et al.,(2004): Metformin in the treatment of non-alcoholic steatohepatitis. A pilot open label trial. Aliment Pharmacol Ther; 20:23-28.

Nguyen MH, Trinh HN, Garcia R, et al.,(2008):Higher rate of sustained virological response in chronic hepatitis c genotype 6 treated with 48 weeks versus 24 weeks of peginterferon plus ribavirin. Am J Gastroenterol;103:1131-1135.

Overbeck K, Genne D, Golay A, et al.,(2008): Pioglitazone in chronic hepatitis C not responding to pegylated interferon –alpha and ribavirin. EASL;49:295-298.

Ozdemir A, Yalinbas B, Selamet U, et al.,(2007): The effect of hepatitis C virus infection on insulin resistance in chronic haemodialysis patients. Yoensei Med J; 48(2):274-280.

Peterson KF, Dufour S, Befroy D, et al.,(2005): Reversal of nonalcoholic hepatic steatosis, hepatic insulin resistance , and hyperglyceamia by moderate weight reduction in patients with type2 diabetes. Diabetes;54:603.

Petit JM, Bour JB, Gallend-Jos C, et al.,(2001): Risk factors for diabetes mellitus and early insulin resistance in chronic hepatitis C. J Hepatol;35(2):279-317.

REFERENCES

Petrides AS, Vogt C, Schulze-Berge D, et al.,(1994): Pathogenesis of glucose intolerance and diabetes mellitus in cirrhosis. *Hepatology*;19:616–627.

Poustchi H, Negro F, Hui J , et al.,(2008): Insulin resistance and response to therapy in patients infected with hepatitis C virus genotype 2 and 3. *J Hepatol*;48:28-34.

Powell EE, Jonsson JR, Clouston AD (2005): Steatosis: co-factor in other liver diseases. *HEPATOLOGY*;42:5-13.

Promrat K, Lutchman G, Uwaifo GI, et al.,(2004): A pilot study of pioglitazone treatment for non-alcoholic steatohepatitis. *Hepatology*;39:188-196.

Romero-Gomez M, Conrado M, Fernandez R, et al.,(2008): Effect of sustained virological response to treatment on the incidence of abnormal glucose values in chronic hepatitis C. *J of Hepatol*;48:721-727.

Romero-Gomez M, Del Mar Vilorio M, Andrade RJ,et al.,(2005): Insulin resistance impairs sustained response rate to peg-interferon plus ribavirin in chronic hepatitis C patients. *Gastroenterology*;128:636-641.

REFERENCES

Rudoni S, Petit JM, Bour JB, et al.,(1999): HCV infection and diabetes mellitus : influence of the use of finger stick devices on nosocomial transmission . Diabetes Metab;25:502-507.

Schwarzinger M, Sahar D, Claire R, et al.,(2004):Chronic hepatitis C virus infection: Does it really impact health- related quality of life? A study in rural Egypt. Hepatology. 40(6);1434-1441.

Seeff LB, Hoofnagle JH, (2002): National Institutes of Health Consensus Development Conference: management of hepatitis C: HEPATOLOGY;36(Suppl):S1-S2.

Shintani Y, Fujie H, Miyoshi H, et al.,(2004): Hepatitis C virus infection and diabetes : Direct involvement of the virus in the development of insulin resistance. Gastroentrology;126:840-848.

Sigal SH, Stanca CM, Kontorinis N, et al.,(2006): Diabetes mellitus is associated with hepatic encephalopathy in patients with HCV cirrhosis. Am J Gastroenterol; 101(10):2244-2250.

Simo R, Lecube A, Genesca J, et al.,(2006): Sustained virological response correlates with reduction in the incidence of glucose

abnormalities in patients with chronic hepatitis C virus infection. *Diabetes Care*;29:2462-2466.

Takaki A, Wiese M, Maertens G, et al.,(2000): Cellular immune responses persist and humoral responses decrease two decades after recovery from a single-source outbreak of hepatitis C. *Nat Med*;6:578–582.

Thomas DL, Seeff LB., (2005): Natural history of hepatitis C. *Clin Liver Dis*;9:383-398.

Tolman KG,(2002): The liver and lovastatin. *Am J Cardiol*;89:1374-1380.

Uygun A, Kadayifci A, Isik AT, et al.,(2004): Metformin in the treatment of patients with non-alcoholic steatohepatitis. *Aliment Pharmacol Ther*;19:537.

Vermehren J, Kau A, Gartner BC, et al.,(2008): Differences between two real-time PCR-based hepatitis C virus assays (Real time HCV and Cobas Ampliprep/ Cobas TaqMan) and one signal amplification assay(Versant HCV RNA 3.0) for RNA detection and quantification. *J Clin Microbiol*; 46:3880-3891.

Wakil A and Merezban Z, (2006): Hepatitis C in Egypt. In Egypt today magazine. HCV advocate, 2006. WWW HCV adovacte.org.

Wang CS, Wang ST, Yao WJ , Chang TT, Chou P.,(2003): Community-based study of hepatitis C virus infection and type 2 diabetes: an association affected by age and hepatitis severity status. Am J Epidemiol;15(8):1154–1160.

Wawrzynowicz-Syczweska M, Underhill JA, Clare MA. et al.,(2000): HLA class II genotypes associated with chronic hepatitis C virus infection and response to alpha-interferon treatment in Poland. Liver;20: 234–239.

WWW. WHO.int/immunization/topics/hepatitis(2008)_c/en/.

Yu JW, Wang GQ, Sun LJ, et al.,(2007):Predictive value of rapid virological response and early virological response on sustained virological response in HCV patients treated with pegylated interferon alpha-2a and ribavirin. J Gastroenterol Hepatol;22:832-836.

Yokohama S, Yoneda M, Haneda M, et al.,(2004): Therapeutic efficacy of an angiotensin II receptor antagonist in patients with nonalcoholic steatohepatitis . Hepatology;40:1222-1225.

REFERENCES

Zein NN, Abdulkarim AS, Wiesner RH, et al.,(2000): Prevalence of diabetes mellitus in patients with end-stage liver cirrhosis due to hepatitis C, alcohol, or cholestatic disease. *J Hepatol*; 32: 209-217.

Zein CO, Levy C, Basu A, et al.,(2005): Chronic hepatitis C and type 2 diabetes mellitus: A prospective cross-sectional study. *American Journal of Gastroenterology*;100:48-55.

Zelber-Sagi S, Kessler A, Brazowsky E, et al.,(2006): A double-blind randomized placebo-controlled trial of orlistat for the treatment of nonalcoholic fatty liver disease. *Clin Gastroenterol Hepatol*; 4:639-644.

Zimmerman J,(1991): Drug-induced liver disease. In *hepatotoxicity : The adverse effects of drugs and other chemicals on the liver*. 2nd ed. Philadelphia, Lippincott Williams and Williams, P. 430.