

DAFTAR KEPUSTAKAAN

- Akura, B., Oswari, H., Supriyanto, H & Advani, N. Incidence and Characteristics of Antituberculosis Drug-induced Hepatotoxicity in Children: A Preliminary Study. *Pediatr Indones.* 2009; 49(6): 342-8.
- An, H., Wu, X., Wang, Z., Xu, J., Zheng, S & Wang, K. The Clinical Characteristics of Anti-Tuberculosis Drug Induced Liver Injury in 2457 Hospitalized Patients with Tuberculosis in China. *Afr J Pharm Pharmacol.* 2013; 7(13): 710-4
- Andrade, R.J., Vega, C.L & Lucena, I. Drug-Induced Hepatotoxicity. *Hepatology Rev.* 2007; 4: 14-23.
- Andrade, R.J., Robles, M., Fernandez-Castaner, A., Lopez-Ortega, S., Lopez-Vega, M.C & Lucena, M.I. Assessment of Drug-Induced Hepatotoxicity in Clinical Practice: A Challenge for Gastroenterologists. *World J Gastroenterol.* 2007; 13(3):329-40.
- Assob, J.C.N., Nde, P.F., Nsagha, D.S., Njunda, A.L., Ngum, N.M & Ngowe, M.N. Incidence and Risk Factors of Anti-Tuberculosis Drugs Induced Hepatotoxicity in HIV/ AIDS Patients Attending the Limbe and Buea Regional Hospitals. *J AIDS Clin Res.* 2014. 5(3): 288
- Babalik, A., Arda, H., Bakirci, N., Agca, S., Oruc, K., Kiziltas, S., Cetintas & Calisir, H. Management of and Risk Factors Related to Hepatotoxicity during Tuberculosis Treatment. *Tuberk Toraks.* 2012; 60(2): 136-44.
- Bell, L.N & Chalasani, N. Epidemiology of Idiosyncratic Drug-Induced Liver Injury. *Semin Liver Dis.* 2009; 29(4): 337-47.
- Bhatia, S., Tullu, M.S., Kannan, S., Gogtay, N.J., Thatte, U.M & Lahiri, K.R. An Unusual Recurrence of Antituberculosis Drug Induced Hepatotoxicity in A Child. *JPGM.* 2011; 57(2): 147-52.
- Bjornsson, E. Review Article: Drug-induced Liver Injury in Clinical Practice. *Aliment Pharmacol Ther.* 2010; 32:3-13.
- Blumberg, H.M., Burman, W.J., Chaisson, R.E., Daley, C.L., Etkind, S.C., Friedman, L.N., et al. American Thoracic Society/ Centers for Disease Control and Prevention/ Infectious Disease Society of America: Treatment of Tuberculosis. *Am J Respir Crit Care Med.* 2003; 167: 603-62.
- Borzakova, S.N., Aksanova, V.A & Reizis, A.R. Viral and Drug-Induced Liver Damage in Children with Tuberculosis: Prevalence, Clinical Features. *Eksp Klin Gastroenterol.* 2013; 1: 38-43.

- Brito, T.C., Possuelo, L.G., Valim, A.R.M., Todendi, P.F., Ribeiro, A.W., Gregianini, T.S., Jarczewski, C.A., Hutz, M.H., Rossetti, M.L.R & Zaha, A. Polymorphisms in CYP2E1, GSTM1 and GSTT1 and Anti-Tuberculosis Drug-Induced Hepatotoxicity. *An Acad Bras Cienc.* 2014; 86(2): 855-65.
- Buchanan, N., Eyberg, C & Davis, M.D. Isoniazid Pharmacokinetics in Kwashiorkor. *S Afr Med J.* 1979; 56: 299-300.
- Chalasani, N & Bjornsson, E. Risk Factor for Idiosyncratic Drug-Induced Liver Injury. *Gastroenterology.* 2010; 138(7): 2246-59.
- Chang, K.C., Leung, C.C., Yew, W.W. & Tam, C.M. Standard Anti-tuberculosis Treatment and Hepatotoxicity: do Dosing Schedules Matter?. *Eur Respir J.* 2007; 29: 347-51.
- Chang, K.C., Leung, C.C., Yew, W.W., Lau, T.Y & Tam, C.M. Hepatotoxicity of Pyrazinamide Cohort and Case Control Analyses. *Am J Respir Crit Care Med.* 2008; 177: 1391-6.
- Chau, T.N. Drug-Induced Liver Injury: An Update. *Medical Bulletin. The Hong Kong Medical Diary.* 2008; 13(3): 23-6.
- Chen, J., Raymond, K. Roles of Rifampicin in Drug-Drug Interaction: Underlying Molecular Mechanisms Involving the Nuclear Pregnen X Receptor. *Ann Clin Microbiol Antimicrob.* 2006; 5:3. p 11.
- Chowdhury, A., Santra, A., Kundu, S., Mukherjee, A., Pandit, A., Chaudhuri, S & Dhali, G.K. Induction of Oxidative Stress in Antitubercular Drug-Induced Hepatotoxicity. *Indian J Gastroenterol.* 2001; 20: 97-100.
- David, S & Hamilton, J.P. Drug-Induced Liver Injury. *US Gastroenterol Hepatol Rev.* 2010; 6:73-80.
- Dean, G.L., Edwards, S.G., Ives, N.J., Matthews, G., Fox, E.P., Navaratne, L., Fisher, M., Taylor, G.P., Miller, R., Taylor, C.B., De Reuter, A & Pozniak, A.L. Treatment of Tuberculosis in HIV-Infected Persons in the Era of Highly Active Antiretroviral Therapy. *AIDS.* 2002; 16:75-83.
- Depkes RI. 2005. *Pedoman Nasional Penanggulangan Tuberkulosis.* Edisi ke-9. Jakarta. Departemen Kesehatan Republik Indonesia.
- De-Lima, M. F. S & de-Melo, H. R. L. Hepatotoxicity induced by antituberculosis drugs among patients coinfected with HIV and tuberculosis. *Cad. Saude Publica.* 2012; 28(4):698-708
- Desrochers, D., Gonzalez-Peralta, R.P., McClenathan, D.T., Wilsey-Jr, M.J & Haafiz, A. Isoniazid-Induced Severe Hepatotoxicity: An Infrequent but Preventable Cause of Liver Failure in Children Treated for Latent

- Tuberculosis Infection. *Clinical Medicine Insights: Pediatrics*. 2011; 5: 9-13.
- Devarbhavi, H. Antituberculosis Drug-Induced Liver Injury: Current Perspective. *Tropical Gastroenterology*. 2011; 32(3): 167-74.
- Devarbhavi, H., Singh, R., Patil, M., Sheth, K., Adarsh, C.K & Balaraju, G. Outcome and Determinants of Mortality in 269 Patients with Combination Anti-Tuberculosis Drug-Induced Liver Injury. *J Gastroenterol Hepatol*. 2013; 28(1):161-7.
- Devrim, I., Olukman, O., Can, D & Dizdarer, C. Risk Factors for Isoniazid Hepatotoxicity in Children with Latent TB and TB: Difference from Adults. *Chest*. 2010; 137(3): 737-8.
- Dodig, S., Raos, M & Letoja, I.Z. Hepatotoxicity of Antituberculosis Drugs in A Mother and A Child Affected by Pulmonary Tuberculosis – A Case Report. *Biochimia Medica*. 2008; 18(1): 99-105.
- Donald, P. 2007. *A Research Agenda for Childhood Tuberculosis. Improving the Management of Childhood Tuberculosis within National Tuberculosis Programmes: Research Priorities Based on A Literature Review*. Geneva. World Health Organization (WHO). <http://www.who.int> (Accessed on January 16, 2012).
- Donald, P.R. Antituberculosis Drug-Induced Hepatotoxicity in Children. *Pediatric Reports*. 2011; 3(e16): 51-64.
- Enarson, D.A., Rieder, H., Arnadottir, T & Trebucq, A. 2000. *Management of Tuberculosis: A Guide for Low Income Countries*. 5th eds. Paris: International Union Against Tuberculosis and Lung Disease.
- Fahr, M.G. 2004. Principles and Practice of Infectious Disease. Volume 1, 2nd ed. London. John Wiley & Sons: p 216-220.
- Fernandez, E., Perez, R., Hernandez, A., Tejada, P., Arteta, M & Ramos, J.T. Factors and Mechanisms for Pharmacokinetic Differences between Pediatric Population and Adults. *Pharmaceutics*. 2011; 3: 53-72.
- Ferrajolo, C., Capuano, A., Verhamme, K.M., Schuemie, M., Rossi, F., Stricker, B.H & Sturkenboom, M.C. Drug-Induced Hepatic Injury in Children: A Case/non-case Study of Suspected Anverse Drug Reactions in VigiBase. *Br J Clin Pharmacol*. 2010; 70(5): 721-8.
- Forget, E.J & Menzies, D. Adverse Reaction to First-Line Antituberculosis Drugs. *Expert Opin Drug Saf*. 2006; 5(2): 231-49.
- Frieden, T.R., Sterling, T.R., Munsiff, S.S., Watt, C.J & Dye, C. Tuberculosis. *Lancet*. 2003; 362: 887-99.

- Glickman, M.S. & Jacobs, W. Jr. Microbial Pathogenesis of *Mycobacterium tuberculosis*. Dawn of a Discipline. *Cell*. 2001; 104 (5): 477-85.
- Graham, S.M. Treatment of Pediatric TB: Revised WHO Guidelines. *Pediatric Respiratory Review*. 2010; 12: 22-6.
- Gulbay, B.E., Gurkan, O.U., Yildiz, O.A., Onen, Z.P., Erkekol, F.O., Baccioglu, A & Acican, T. Side Effects due to Primary Antituberculosis Drugs during the Initial Phase of Therapy in 1149 Hospitalized Patients for Tuberculosis. *Respiratory Medicine*. 2006; 100: 1834-42.
- Hercus, C.G., Khoo, J.K & Jones, T.E. A Case of Hyperacute Hepatotoxicity in Response to Tuberculosis Therapy. *Int J Tuberc Lung Dis*. 2012; 16(12): 1709-10.
- Hopewell, P.C & Bloom, B.R. 2002. Tuberculosis and Other Mycobacterial Disease. In Murray. *Textbook of Respiratory Medicine*. 2nd ed. Philadelphia. WB Saunders Co. p 1095-100.
- Hotchandani, H., Moorani, K.N & Kazi, Y. Anti-tuberculosis Therapy induced Hepatotoxicity in Children. *Pak Pediatr J*. 2013; 37(2): 117-22.
- Huang, Y.S., Chern, H.D., Su, W.J., Wu, J.C., Lai, S.L., Yang, S.Y., Chang, F. & Lee, S.D. Polymorphism of the N-Acetyltransferase 2 Gene as a Susceptibility Risk Factor for Antituberculosis Drug-Induced Hepatitis. *Hepatology*. 2002; 35: 883-9.
- Hunt, C.M., Westerkam, W.R & Stave, G.M. Effect of Age and Gender on the Activity of Human Hepatic CYP3A. *Biochem Pharmacol*. 1992; 44: 275-83.
- Hussain, Z., Kar, P & Husain, S.A. Antituberculosis Drug-Induced Hepatitis: Risk Factors, Prevention and Management. *Indian Journal of Experimental Biology*. 2003; 41: 1226-32.
- IDAI. 2010. *Pedoman Pelayanan Medis: Tuberkulosis*. Jilid I. Jakarta. Ikatan Dokter Anak Indonesia.
- IDAI. 2005. *Pedoman Nasional Tuberkulosis Anak*. UKK Pulmonologi. Jakarta: PP Ikatan Dokter Anak Indonesia.
- Ikawati, Z. 2010. *Cerdas Mengenali Obat*. Yogyakarta: Kanisius.
- Jenner, A.M & Timbrell, J.A. Influence of Inducers and Inhibitors of Cytochrome P450 on the hepatotoxicity of Hydrazine in vivo. *Arch Toxicol*. 1994; 68: 349-57.
- Jeong, I., Park, J.S., Cho, Y.J., Yoon, H.I., Song, J., Lee, C.T & Lee, J.H. Drug-Induced Hepatotoxicity of Anti-Tuberculosis Drugs and Their Serum Levels. *J Korean Med Sci*. 2015; 30: 167-72.

- Jindani, A., Nunn, A.J & Enarson, D.A. Two 8-Month Regimens of Chemotherapy for Treatment of Newly Diagnosed Pulmonary Tuberculosis: International Multicenter Randomised Trial. *Lancet*. 2004; 364: 1244-51.
- Johnston, D.E. Special Considerations in Interpreting Liver Function Tests. *Am Fam Physician*. 1999; 59(8): 2223-30.
- Joshi, J.M. Tuberculosis Chemotherapy in the 21st Century: Back to Basics. *Lung India*. 2011; 28(3): 193-200.
- Kaona, F.A., Tuba, M., Siziya, S & Sikaona, L. An Assessment of Factors Contributing to Treatment Adherence and Knowledge of TB Transmission Among Patients on TB Treatment. *BMC Public Health*. 2004; 4(68).
- Kartasasmita, C.B. Epidemiologi Tuberkulosis. *Sari Pediatri*. 2009; 11(2):124-9.
- Kearns, G.L., Abdel-Rahman, S.M., Alander, S.W., Blowey, D.L., Leeder, J.S & Kauffman, R.E. Developmental Pharmacology-Drug Disposition, Action, and Therapy in Infants and Children. *N Engl J Med*. 2003; 349:1157-67.
- Khalili, H., Dashti-Khavidaki, S., Rasoolinejad, M., Rezaie, L & Etminani, M. Anti-Tuberculosis Drugs Related Hepatotoxicity; Incidence, Risk Factors, Pattern of Changes in Liver Enzymes and Outcome. *DARU*. 2009. 17(3): 163-7.
- Khoharo, H.K., Ansari, S., Siddiqui, A.K & Qureshi, F. Standard Antituberculosis Drug Induced Hepatotoxicity: Do the Risk Factors matters?. *JLUMHS*. 2010; 09(02).
- Kliewer, S.A., Googwin, B & Willson, T.M. The Nuclear Pregnan X Receptor: A Key Regulator of Xenobiotic Metabolism. *Endocr Rev*. 2002; 23: 687-702.
- Kwon, Y.S., Koh, W.J., Suh, G.Y., Chung, M.P., Kim, H & Kwon, J.K. Hepatitis C Virus Infection and Hepatotoxicity During Antituberculosis Chemotherapy. *Chest*. 2006; 131(3): 803-8.
- Krishnaswamy, K. Drug Metabolism and Pharmacokinetics in Malnourished Children. *Clinical Pharmacokinetics*. 1989; 17 (suppl 1): 68-88.
- Lee, W.M. Drug-Induced Hepatotoxicity. *N Engl J Med*. 1995; 333: 1118-27.
- Lee, W.M. Drug-Induced Hepatotoxicity. *N Engl J Med*. 2003; 349 (5): 474-85.
- Lee, A.M., Mennone, J.Z., Jones, R.C & Paul, W.S. Risk Factors for Hepatotoxicity Associated with Rifampin and Pyrazinamide for Treatment of Latent Tuberculosis Infection: Experience from Three Public Health Tuberculosis Clinic. *Int J Tuberc Lung Dis*. 2002; 6(11). 995-1000.
- Lee, W.M & Senior, J.R. Recognizing Drug-Induced Liver Injury: Current Problems, Possible Solutions. *Toxicologic Pathology*. 2005; 33: 155-64.

- Li, T & Chiang, J.Y.L. Rifampicin Induction of CYP3A4 Requires PXR Crosstalk with HNF4 α and Co-activators, and Suppression of SHP Gene Expression. *Drug Metab Dispos.* 2006; 34(5): 756-764.
- Liu, F., Jiao, A., Wu, X., Zhao, W., Yin, Q., Qi, H., Jiao, W., Xiao, J., Sun, L., Shen, C., Tian, J., Shen, D., Jacqz-Aigrain, E & Shen, A. Impact of Glutathione S-Transferase M1 and T1 on Anti-Tuberculosis Drug-Induced Hepatotoxicity in Chinese Pediatric Patients. *PLoS ONE.* 2014; 9(12): e115410
- Lönnroth, K., Castro, K.G., Chakaya, J.M., Chauhan, L.S., Floyd, K., Glaziou, P & Ravaglione, M.C. Tuberculosis Control and Elimination 2010-50: Cure, Care, and Social Development. *Lancet.* 2010; 375: 1814-29.
- Lv, X., Tang, S., Xia, Y., Zhang, Y., Wu, S., Yang, Z., Li, X., Tu, D., Chen, Y., Deng, P., Ma, Y., Chen, D., Chen, R & Zhan, S. NAT2 Genetic Polymorphisms and Anti-Tuberculosis Drug-Induced Hepatotoxicity in Chinese Community Population. *Annals Hepatology.* 2012; 11(5): 700-7.
- Ma, X., Idle, J.R & Gonzalez, F.J. The Pregnan X Receptor: From Bench to Bedside. *Expert Opin Drug Metab Toxicol.* 2008; 4(7): 895-908.
- Madiyono, B., Moeslichan Mz, S., Sastroasmoro, S., Budiman, I & Purwanto, S.H. Perkiraan Besar Sampel (dalam) Sastroasmoro, S & Ismael, S. 2008. Dasar-dasar Metodologi Penelitian Klinis. Ed-3. Jakarta: Sagung Seto.
- Mahajan, M., Rohatgi, D., Talwar, V., Patni, S.K., Mahajan, P & Agarwal, D.S. Serum and Cerebrospinal Fluid Concentrations of Rifampicin at Two Dose Levels in Children with Tuberculosis Meningitis. *J Commun Dis.* 1997; 29(3): 269-74.
- Makhlof, H.A., Helmy, A., Fawzy, E., El-Attar, M & Rasheed, H.A.G. A Prospective Study of Antituberculosis Drug-Induced Hepatotoxicity in an Area Endemic for Liver Diseases. *Hepatol Int.* 2008; 2: 353-60
- Marzuki, O.A., Fauzi, A.R.M., Ayoub, S & Kamarul, I.M. Prevalence and Risk Factors of Anti-Tuberculosis Drug-Induced Hepatitis in Malaysia. *Singapore Med J.* 2008; 49(9): 688-93
- Mahmood, K., Hussain, A., Jairamani, K.L., Talib, A., Abbasi, B & Salkeen, S. Hepatotoxicity with Antituberculosis Drugs: the Risk Factors. *Pak J Med Sci.* 2007; 23(1): 33-8.
- Mansukhani, S & Shah, I. Hepatic Dysfunction in Children with Tuberculosis on Treatment with Antituberculosis Therapy. *Annals Hepatology.* 2012; 11(1): 96-99.
- Mansjoer, A. et al. 2001. Kapita Selekta Kedokteran. Jakarta: Fakultas Kedokteran Universitas Indonesia. Media Aesculapius FKUI.

- Meena, L.S & Rajni. Survival Mechanisms of Pathogenic Mycobacterium Tuberculosis H37Rv. *FEBS J.* 2010; 277(11): 2416-27.
- Mehta, S. Malnutrition and Drugs: Clinical Implications. *Dev Pharmacol Ther.* 1990; 15(3-4): 159-65.
- Mehta, N., Ozick, L.A & Pinsky, M.R. 2012. Drug-Induced Hepatotoxicity. *Emedicine. Medscape Drug & Disease Reference.* <http://emedicine.medscape.com> (Accessed July 17, 2014).
- Milsap, R.L & Jusko, W. J. Pharmacokinetics in the Infant. *Environment Health Perspect.* 1994; 102 (suppl 11): 107-10.
- Munoz, F.M & Starke, J.R. Tuberculosis (Mycobacterium tuberculosis). In Behrman, R.E., Kligman, R.M & Jenson, H.B. (Eds) 2004. *Nelson Textbook of Pediatrics.* 17th ed. Philadelphia: Saunders. P 958-72.
- Murray, K.F. Drug-Induced Liver Disease. (in) Kelly, D (ed). 2008. *Disease of the Liver and Biliary System in Children*, 3rd edition. West Sussex, UK: Blackwell Publishing. P 207-30.
- Naranjo CA, U Busto, et al. 1981. A method for estimating the probability of adverse drug reactions. *Clinical Pharmacology and Therapeutics;* 30(2): 239-45.
- Nader, L.A., De Mattos, A.A., Picon, P.D., Bassanesi, S.L., De Mattos, A.Z & Rodriguez, M.P. Hepatotoxicity due to Rifampicin, Isoniazid and Pyrazinamide in Patients with Tuberculosis: Is Anti-HCV a Risk factor?. *Annals of Hepatology.* 2010; 9(1): 70-74.
- Nishimura, Y., Kurata, N., Sakurai, E & Yasuhara, H. Inhibitory Effect of Antituberculosis Drugs on Human Cytochrome P450-Mediated Activities. *J Pharmacol Sci.* 2004; 96: 293-300.
- Nunez, M. Hepatotoxicity of Antiretrovirals: Incidence, Mechanisms and Management. *J Hepatol.* 2006; 44(suppl.1):132-9
- Ohkawa, K., Hashiguchi, M., Ohno, K., Kiuchi, C., Takahashi, S., Kondo, S., Echizen, H & Ogata, H. Risk Factors for Antituberculosis Chemotherapy-Induced Hepatotoxicity in Japanese Pediatric Patients. *Clin Pharmacol Ther.* 2002; 72(2): 220-6.
- Ohno, M., Yamaguchi, I., Yamamoto, I. Slow N-Acetyltransferase 2 Genotype Affects the Incidence of Isoniazid and Rifampicin-Induced Hepatotoxicity. *Int J Tuberc Lung Dis.* 2000; 4: 256-61.
- Pande, J.N., Singh, S.P.N., Khilnani, G.C., Khilnani, S & Tandon, R.K. Risk Factors for Hepatotoxicity from Antituberculosis Drugs: A Case-Control Study. *Thorax.* 1996; 51: 132-6

- Park, B.K., Kitteringham, N.R., Maggs, J.L., Pirmohamed, M & Williams, D.P. The Role of Metabolic Activation in Drug-Induced Hepatotoxicity. *Annu Rev Pharmacol Toxicol.* 2005; 45: 177-202.
- Pasipanodya, J & Gumbo, T. Clinical and Toxicodynamic Evidence that High-Dose Pyrazinamide is not More Hepatotoxic than the Low Doses Currently Used. *Antimicrob Agents Chemother.* 2010; 54(7): 2847-54.
- Peloquin, C.A. 2009. Tuberculosis. In Dipiro, J.T., Talbert, R.L., Yee, G.C., Matzke, G.R., Wells, B.G & Posey, L.M. (Eds). *Pharmacotherapy A Pathophysiologic Approach.* (7th ed). New York: McGraw Hill Companies Inc.
- Pineiro-Carrero, V.M & Pineiro, E.O. Liver. *Pediatrics.* 2004; 113(4): 1097-106.
- Perhimpunan Dokter Paru Indonesia (PDPI). 2006. *Buku Pedoman Diagnosis dan Penatalaksanaan di Indonesia.* Jakarta. PDPI.
- Pukenye, E., Lescure, F.X., Rey, D., Rabaud, B., Hoen, B., Chavanet, P., Laiskonis, A.P., Schmit, J.L., May, T., Mouton, Y & Yazdanpanah, Y. Incidence of and Risk Factors for Severe Liver Toxicity in HIV-Infected Patients on Antituberculosis Treatment. *Int J Tuberc Lung Dis.* 2007; 11:74-84.
- Rahajoe, N.N., Basir, D., Makmuri, M.S & Kartasasmita, C.B. 2008. *Pedoman Nasional Nasional Tuberkulosis Anak.* Jakarta: Badan Penerbit IDAI. P 93-100.
- Roberts, E.A. Drug-Induced Liver Disease. (in) Suchy, F.J., Sokol, R.J., Balistreri, W.F (eds). 2007. *Liver Disease in Children.* Cambridge, UK: Cambridge University Press. P 478-512.
- Roberts, E.A. Drug-Induced Hepatotoxicity. (in) Kleinman, R.E., Goulet, O.J., Mieli-Vergani, G., Sanderson, I.R., Sherman, D.M & Shneider, B.L (eds). 2008. *Walker's Pediatric Gastrointestinal Disease,* 4th edition. Hamilton, Ontario: BC Decker. P 1219-40.
- Rockey, D.C., Seeff, L.B., Rochon, J., Freston, J., Chalasani, N., Bonachini, M., Fontana, R.J & Hayashi, P.H for the US Drug-Induced Liver Injury Network. Causality Assessment in Drug-Induced Liver Injury Using a Structured Expert Opinion Process: Comparison to the Roussel-Uclaf Causality Assessment Method. *Hepatology.* 2010; 51(6): 2117-26.
- Roy, B., Chowdhury, A., Kundu, S. Increased Risk of Antituberculosis Drug-Induced Hepatotoxicity in Individuals with Gluthatione S-Transferase M1 'null' Mutation. *J Gastroenterol Hepatol.* 2001; 16: 1033-7

- Roy, V., Gupta, D., Gupta P., Sethi, G.R & Mishra, T.K. Pharmacokinetics of Isoniazid in Moderately Malnourished Children with Tuberculosis. *Int J Tuberc Lung Dis.* 2010; 14(3): 374-6
- Russmann, S., Kullak-Ublick, G.A & Grattagliano, I. Current Concepts of Mechanisms in Drug-Induced Hepatotoxicity. *Current Medical Chemistry.* 2009; 16:3041-53
- Saifullah, B., Hussein, M.Z.B & Al Ali, S.H.H. Controlled-Relapse Approaches Towards the Chemotherapy of Tuberculosis. *International Journal of Nanomedicine.* 2012; 7: 5451-63.
- Sakuma, T., Kawasaki, Y., Jarukamjorn, K & Nemoto, N. Sex Differences of Drug-metabolizing Enzyme: Female Predominant Expression of Human and Mouse Cytochrome P450 3A Isoforms. *Journal of Health Science.* 2009; 55(3): 325-37.
- Saukkonen, J.J., Cohn, D.L., Jasmer, R.M., Schenker, S., Jereb, J.A., Nolan, C.M., Peloquin, C.A., Gordin, F.M., Nunes, D., Strader, D.B., Bernardo, J., Vankataramanan, R. & Sterling, T.R. An Official ATS Statement: Hepatotoxicity of Antituberculosis Therapy. *Am J Respir Crit Care Med.* 2006; 174: 935-52.
- Saukkonen, J. Challenges in Reintroducing Tuberculosis Medications after Hepatotoxicity. *CID.* 2010; 50: 840-2.
- Saukkonen, J.J., Powell, K & Jereb, J.A. Monitoring for Tuberculosis Drug Hepatotoxicity: Moving from Opinion to Evidence. *Am J Respir Crit Care Med.* 2012; 185: 598-9.
- Schaberg, T., Rebhan, K & Lode, H. Risk Factors for Side-Effects of Isoniazid, Rifampin and Pyrazinamide in Patients Hospitalized for Pulmonary Tuberculosis. *Eur Resp J.* 1996; 9: 2026-30.
- Science, M., Ito, S & Kitai, I. Isoniazid Toxicity in A 5-Year-Old Boy. *CMAJ.* 2013; 185(10): 894-6.
- Shakya, R., Rao, B.S & Shrestha, B. Evaluation of Risk Factors for Antituberculosis Drug-induced Hepatotoxicity in Nepalese Population. *Khatmandu University Journal of Science, Engineering and Technology.* 2006; 2(1): 1-8.
- Shang, P., Xia, Y., Liu, F., Wang, X., Yuan, Y., et al. Incidence, Clinical Features and Impact on Anti-Tuberculosis Treatment of Anti-Tuberculosis Drug Induced Liver Injury (ATLI) in China. *Plos One.* 2011. 6(7): e21836.
- Sharifzadeh, M., Rasoulinejad, M., Valipour, F., Nouraei, M & Vaziri, S. Evaluation of Patient-Related Factors Associated with Causality, Preventability, Predictability and Severity of Hepatotoxicity during Antituberculosis Treatment. *Pharmacol Res.* 2005; 51: 353-8.

- Sharma, S.K., Balamurugan, A., Saha, P.K., Pandey, R.M & Mehra, N.K. Evaluation of Clinical and Immunogenetic Risk Factor for the Development of Hepatotoxicity during Antituberculosis Treatment. *Am J Respir Crit Care Med.* 2002; 166: 916-19.
- Sharma S.K & Mohan, A. Antituberculosis Treatment-Induced Hepatotoxicity: From Bench to Bedside. Medicine Update. 2005; p 479-84
- Sharma, S.K., Singla, R., Sarda, P., Mohan, A., Makharia, G., Jayaswal, A., Sreenivas, V & Singh, S. Safety of 3 Different Reintroduction Regimens of Antituberculosis Drugs after Development of Antituberculosis Treatment-Induced Hepatotoxicity. *CID.* 2010; 50: 833-9.
- Shen, C., Meng, Q., Zhang, G & Hu, W. Rifampicin Exacerbates Isoniazid-Induced Toxicity in Human but Not in Rat Hepatocytes in Tissue-Like Cultures. *British Journal of Pharmacology.* 2008; 153: 784-91.
- Shih, T.Y., Pai, C.Y., Yang, P., Chang, W.L., Wen, N.C & Hu, Y.P. A Novel Mechanism Underlies the Hepatotoxicity of Pyrazinamide. *Antimicrobial Agent and Chemotherapy.* 2013; 57(4): 1685-90.
- Shu, C.C., Lee, C.H., Lee, M.C., Wang, J.Y., Yu, C.J & Lee, L.N. Hepatotoxicity due to first-line anti-tuberculosis drugs: a five year experience in Taiwan medical center. *In J Tuberc Lung Dis.* 2013. 17(7): 934-9
- Sia, I.G & Wieland, M.L. Current Concepts in the Management of Tuberculosis. *Mayo Clin Proc.* 2011; 86(4):348-61.
- Singanayagam, A., Sridhar, S., Dhariwal, J., Abdel-Aziz, D., Munro, K., Connell, D.W., George, P.M., Molyneaux, P.L., Cooke, G.S., Burroughs, A.K., Lalvani, A., Wickremasinghe, M & Kon, O.M. A Comparison between Two Strategies for Monitoring Hepatic Function during Antituberculosis Therapy. *Am J Respir Crit Care Med.* 2012; 85(6): 653-9.
- Singh, G & Pitoyo, C.W. The Prevalence and Factors Associated with Drug-Induced Hepatitis in HIV-Positive Tuberculosis Patients. *The Indonesian Journal of Gastroenterology Hepatology and Digestive Endoscopy.* 2012; 13(2): 80-5.
- Singh, J., Arora, A., Garg, P.K., Thakur, V.S., Pande, J.N & Tandon, R.K. Antituberculosis Treatment-Induced Hepatotoxicity: Role of Predictive Factors. *Postgrad Med J.* 1995; 71: 359-62
- Singla, R., Sharma, S.K., Mohan, A., Makharia, G., Sreenivas, V., Jha, B., Kumar, S., Sarda, P & Singh, S. Evaluation of Risk Factors for Antituberculosis Treatment induced Hepatotoxicity. *Indian J Med Res.* 2010; 132: 81-6
- Sistanizad, M., Azizi, E., Khalili, H., Hajiabdolbaghi, M., Gholami, K & Mahjub, R. Antituberculosis Drug-Induced Hepatotoxicity in Iranian Tuberculosis

- Patients: Role of Isoniazid Metabolic Polymorphism. *IJPR*. 2011; 10(3): 633-9.
- Sjarif, D., Nasar, S.S., Devaera, Y., Tanjung, C.F. 2011. *Asuhan Nutrisi Pediatrik*. UKK Nutrisi & Penyakit Metabolik Ikatan Dokter Anak Indonesia.
- Soldin, O. P., Chung, S.H & Mattison, D.R. Sex Differences in Drug Disposition. *Journal of Biomedicine and Biotechnology*. 2011; ID 187103, 14 pages.
- Sonika, U & Kar, P. Tuberculosis and Liver Disease: Management Issues. *Tropical Gastroenterology*. 2012; 33(2): 102-6
- Sotsuka, T., Sasaki, Y., Hirai, S., Yamagishi, F & Ueno, K. Association of Isoniazid-Metabolizing Enzyme Genotypes and Isoniazid-Induced Hepatotoxicity in Tuberculosis Patients. *In Vivo*. 2011; 25: 803-12.
- Stanley, F.L. Reference Intervals for Laboratory Tests and Procedures. (in) Kliegman, R.M., Stanton, B.F., Schor, N.F., St Geme III, J.W & Behrman, R.E (eds). 2011. Nelson Textbook of Pediatrics, 9th edition. Philadelphia, USA: Elsevier Saunders. P 2446.
- Supariasa, I.D.N., Bakri, B., Fajar, I. 2002. Penilaian Status Gizi. Jakarta: EGC.
- Tahaoglu, K., Atac, G., Sevim, T., Torun, T., Yazicioglu, O., Horzum, G., Gemci, I & Ongel, A. The Management of Anti-Tuberculosis Drug-Induced Hepatotoxicity. *Int J Tuberc Lung Dis*. 2001; 5(1): 65-9.
- Tajiri, K & Shimizu, Y. Practical Guidelines for Diagnosis and Early Management of Drug-Induced Liver Injury. *World J Gastroenterol*. 2008; 14(44): 6774-85.
- Teleman, M. D., Chee, C. B. E., Earnest, A & Wang, Y.T. Hepatotoxicity of Tuberculosis Chemotherapy under General Programme Conditions in Singapore. *Int J Tuberc Lung Dis*. 2002; 6(8): 699-705.
- The Union (International Union against Tuberculosis and Lung Disease). 2010. Desk-guide for Diagnosis and Management of TB in Children. USAID. Paris, France.
- Thongraung, W., Lertphongpiroon, W., Pungrassami, P & Ratanajamit, C. Physician's Practices Regarding Management of Antituberculosis Drug-Induced Hepatotoxicity. *Southeast Asian J Trop Med Public Health*. 2012; 43(3): 724-34.
- Tost, J.R., Vidal, R., Cayla, J., Diaz-Cabanelas, D., Jimenez, A & Broquetas, J.M. Severe Hepatotoxicity due to Anti-Tuberculosis Drugs in Spain. *Int J Tuberc Lung Dis*. 2005; 9(5): 534-40.
- Tostmann, A., Boeree, M.J., Aarnoutse, R.E., Lange, W.C.M., Van der Ven, A.J.A.M & Dekhuijzen, R. Antituberculosis Drug-Induced Hepatotoxicity:

Concise up-to-date Review. *Journal of Gastroenterology and Hepatology*. 2008; 23: 192-202.

Tostmann, A., Boeree, M.J., Peters, W.H., Roelofs, H.M., Aarnoutse, R.E., Van der Ven, A.J & Dekhuijzen, P.N. Isoniazid and It's Toxic Metabolite Hydrazine Induce in Vitro Pyrazinamide Toxicity. *Int J Antimicrob Agents*. 2008; 31(6): 577-80.

Tostmann, A., Boogaard, J.V.D., Semvua, H., Kisonga, R., Kibiki, G.S., Aarnoutse, R.E & Boeree, M.J. Antituberculosis Drug-Induced Hepatotoxicity is Uncommon in Tanzanian Hospitalized Pulmonary TB Patients. *Tropical Medicine and International Health*. 2010; 15(2): 268-72.

Troutman, W.G. Drug-Induced Disease; Drug-Induced Hepatotoxicity. (In) Anderson, P.O., Knoben, J.E & Troutman, W.E (eds). 2002. *Handbook of Clinical Drug Data* (10th edition). New York: McGraw-Hill. p 830-40

Tsagaropoulou-Stinga, H., Mataki-Emmanouilidou, T., Karida-Kavalioti, S & Manios, S. Hepatotoxic Reaction in Children with Severe Tuberculosis Treated with Isoniazid-Rifampin. *Pediatr Infect Dis*. 1985; 4: 270-3.

Turner, M.O & Elwood, R.K. Severe Hepatic Complications of Antituberculous Therapy. *Can J Infect Dis*. 1999; 10(2): 167-9.

van Hest, R., Baars, H., Kik, S., van Gerven, P., Trompenaars, M.C., Kalisvaart, N., Keizer, S., Borgdorff, M., Mensen, M & Cobelens, F. Hepatotoxicity of Rifampin-Pyrazinamide and Isoniazid Preventive Therapy and Tuberculosis Treatment. *CID*. 2004; 39: 488-96

Villor, A.F., Sopena, B & Villor, J.F. The Influence of Risk Factors on the Severity of Antituberculosis Drug Induced Hepatotoxicity. *Int J Tuberc Lung Dis*. 2004; 8: 1499-505.

Vuilleumier, N., Rossier, M.F., Chiappe, A., Degoumois, F., Dayer, P., Mermilliod, B., Nicod, L., Desmeules, J & Hochstrasser, D. CYP2E1 Genotype and Isoniazid-Induced Hepatotoxicity in Patients Treated for Latent Tuberculosis. *Eur J Clin Pharmacol*. 2006; 62: 423-9.

Wares, D.F., Singh, S., Acharya, A.K & Dangi, R. Non-Adherence to Tuberculosis Treatment in the Eastern Tarai of Nepal. *Int J Tuberc Lung Dis*. 2003; 7: 327-35.

Wen, X., Wang, J.S., Neuvonen, P.J & Backman, J. T. Isoniazid is A Mechanism-Based Inhibitor of Cytochrome P450 1A2, 2A6, 2C19 and 3A4 Isoforms in Human Liver Microsomes. *Eur J Clin Pharmacol*. 2002; 57: 799-804.

Whitney, J., Hurwitz, M., Mojtahe, A., Hwang, C & Gallo. A. Acute Liver Failure in Pediatric Patient with Disseminated Tuberculosis. *Dig Dis Sci*. 2011; 56: 2780-3.

- WHO. 2003. Treatment of Tuberculosis: Guidelines for National Program. Geneva. World Health Organization.
- WHO. 2004. TB/HIV A Clinical Manual. 2nd ed. Geneva. World Health Organization.
- WHO 2004. Anti-tuberculosis Drug Resistance in the World. Third Global Report. Geneva: World Health Organization.
- WHO. 2012. *The Burden of Disease Caused by TB. In The WHO Global Tuberculosis Report 2012.* <http://www.who.int> (Accessed on January 16, 2012).
- WHO. 2014. *Tuberculosis. WHO Fact Sheet No. 104.* <http://www.who.int> (Accessed July 22, 2014)
- WHO, 2014. *Tuberculosis Country Profiles, Epidemiology and Strategy: Indonesia.* Geneva. World Health Organization. <http://www.who.int> (Accessed on July 22, 2014).
- Wolbold, R., Klein, K., Burk, O., Nussler, A.K., Neuhaus, P., Eichelbaum, M., Schwab, M & Zanger, U.M. Sex is A Major Determinant of CYP3A4 Expression in Human Liver. *Hepatology.* 2003; 38(4): 978-88.
- Wu, S., Xia, Y., Lv, X., Zhang, Y., Tang, S., Yang, Z., Tu, D., Deng, P., Cheng, S., Wang, X., Yuan, Y., Liu, F., Hu, D & Zhan, S. Effect of Scheduled Monitoring of Liver Function during Anti-tuberculosis Treatment in A Retrospective Cohort in China. *BMC Public Health.* 2012; 12:454.
- Yamamoto, T., Suou, T & Hirayama, C. Elevated Serum Aminotransferase Induced by Isoniazid in Relation to Isoniazid Acetylator Phenotype. *Hepatology.* 1986; 6: 295-8.
- Yani, F.F., Machmoed, R., Marhefdison & Basir, D. Tuberculosis Score Chart Sign and Symptoms in Children with Positive Tuberculin Skin Test. *Pediatr Indones.* 2012; 52(2): 78-85.
- Yee, D., Valiquette, C., Pelletier, M., Parisien, I., Rocher, I & Menzies, D. Incidence of Serious Side Effects from First-Line Antituberculosis Drugs among Patients Treated for Active Tuberculosis. *Am J Respir Crit Care Med.* 2003; 167: 1472-7.
- Yew, W & Leung, C. Antituberculosis Drugs and Hepatotoxicity. *Medical Bulletin, The Hong Kong Medical Diary.* 2007; 12(1): 7-9.
- Yimer, G., Aderaye, G., Amogne, W., Makonnen, E., Aklillu, E., Lindquist, L., Yamuah, L., Feleke, B & Aseffa, A. Anti-Tuberculosis Therapy-Induced Hepatotoxicity among Ethiopian HIV-Positive and Negative Patients. *Plos One.* 2008; 3(3): e1809.

Younossian AB, Rochat T, Ketterer JP, Wacker J, Janssens JP. High hepatotoxicity of pyrazinamide and ethambutol for treatment of latent tuberculosis. *Eur Respir J.* 2005; 26: 462-4.

Zaman, R. Prevalence and Risk Factors of Antitubercular Drug-Induced Hepatitis in Urban Population of Bahawalpur District Punjab-Pakistan. *J App Pharm.* 2011. 02(03): 221-33

Zhen-zhen, S & Chao-min, Z. Clinical Study of Antitubercular Agent-Induced Hepatotoxicity in 194 Children. *Acta Metallurgica Sinica.* 2015; 29(6):453-57.

Zhou, Y., Yang, L., Liao, Z., Zhou, Y & Guo, H. Epidemiology of Drug-Induced Liver Injury in China: A Systematic Analysis of the Chinese Literature Including 21789 Patients. *Eur J Gastroenterol Hepatol.* 2013; 25(7): 825-9.

Zhu, B., Liu, Z.Q., Chen, G.L., Chen, X.P., Ou-Yang, D.S., Wang, L.S., Huang, S.L., Tang, Z.R & Zhou, H.H. The Distribution and Gender Difference of CYP3A Activity in Chinese Subjects. *J Clin Pharmacol.* 2003; 55: 264-9.

