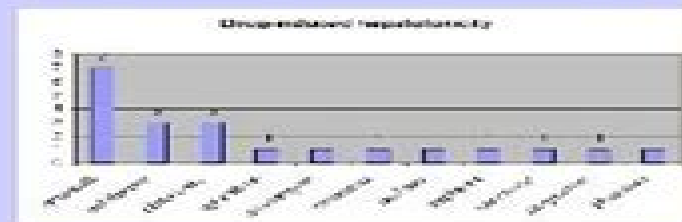


Drug induced – Hepatotoxicity

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- **Objective.** Drug induced hepatotoxicity is one of the most frequent Adverse Drug Reaction (ADR) and the main cause of drug withdrawal from the market. The goal of the study was to determine the frequency of this ADR in hospitalized patients and to identify the drugs involved in hepatotoxicity
- **Material and Methods .** The study was performed in the Pharmacovigilance Section of the Internal Medicine Division of Angerich Hospital . 390 patients were evaluated between november 2007 and april 2008. Blood laboratory tests including hepatogram were performed to all patients admitted to this division and repeated every 48 - 72 hours. When a possible case of drug induced hepatotoxicity was detected, the Naranjo Score (drug causality) was assessed to determine the drug causality. We included for this study all the ADRs in the range of six or more points (classified as probable or highly probable). The ADRs were reported to the Argentine regulatory agency ANMAT (Agencia Nacional de Medicamentos, Alimentos y Tecnología médica).



- **Results.** The incidence of drug – induced hepatotoxicity was 5.38%. (21 cases were reported). This represented 25.3% of total ADRs (83). The most frequently drug involved were ampicillin – sulbactam (7 cases), ceftriaxone (3) and ciprofloxacin (3); the other drugs involved were phenytoin, cytarabine, piperacillin / tazobactam, clindamycin, carbamazepine, cephalexin, doxycycline and vancomycin. The pattern of hepatotoxicity was cholestatic in 5 cases, hepatocellular in 8 cases and mixed in 8 cases. Of 21 cases, 2 were severe (one fulminant hepatitis with death and one drug related admission).
- **Discussion.** The incidence of drug induced Hepatotoxicity was higher than the reported from the international studies. Antibiotics were responsible for 85% of the total cases being ampicillin – sulbactam the more hepatotoxic combination.

Druginduced Hepatotoxicity

**Ross Cameron, George Feuer, Felix de
la Iglesia**

Drug-induced Hepatotoxicity:

Hepatotoxicity Hyman J. Zimmerman, 1999 Written by the foremost authority in the field this volume is a comprehensive review of the multifaceted phenomenon of hepatotoxicity Dr Zimmerman examines the interface between chemicals and the liver the latest research in experimental hepatotoxicology the hepatotoxic risks of household industrial and environmental chemicals and the adverse effects of drugs on the liver This thoroughly revised updated Second Edition features a greatly expanded section on the wide variety of drugs that can cause liver injury For quick reference an appendix lists these medications and their associated hepatic injuries Also included are in depth discussions of drug metabolism and factors affecting susceptibility to liver injury Drug Hepatotoxicity, An Issue of Clinics in Liver Disease Nicholas P. Pyrsopoulos, 2013-10-16 Dr Pyrsopoulos has created a comprehensive review on the most important and timely topics in drug hepatotoxicity He has arranged for there to be a full span of very basic articles that discuss drug metabolism hepatotoxicity and drug induced acute liver failure as well as other important articles devoted to clinical manifestations and treatment of drug induced hepatotoxicity Pathological manifestations of drug induced hepatotoxicity Drug induced cholestasis Lipid lowering agents induced hepatotoxicity Herbal complementary and alternative medicine induced liver injury Antiretroviral and anti HCV DAA related hepatotoxicity Antibiotic related hepatotoxicity Acetaminophen related hepatotoxicity NSAIDs induced hepatotoxicity Chemotherapy induced hepatotoxicity Anti epileptic induced hepatotoxicity and steatohepatitis induced by drugs **Drug-induced liver injury** Council for International Organizations of Medical Sciences (CIOMS), 2020-06-15 Drug induced liver injury DILI is a growing challenge because of the ever increasing number of drugs used in medical care DILI is rare but can be serious and is largely unpredictable It is an important cause of mortality and liver transplantation and a leading cause of attrition in drug development Progress is under way in identifying genetic risk factors exploring new mechanistic concepts of the complex underlying interactions and developing new biomarkers that can predict or diagnose DILI The pharmaceutical industry has a key role in advancing these initiatives and prospective DILI registries must adopt standard procedures for biological sample collection and storing There is a strong need for standard guidelines to support these efforts The consensus report of the CIOMS DILI Working Group aims to provide a critical framework and essential set of tools to detect diagnose and manage DILI during drug development and in the post marketing setting The report is intended for clinical and basic pharmaceutical industry investigators who capture analyze and communicate liver safety data in drug development It is also intended for regulatory scientists and expert consultants who comprehensively evaluate new products and emerging biomarkers for their association with DILI risk and for health care professionals who monitor and manage patients treated with potentially hepatotoxic drugs in clinical practice Corrigendum On page 138 under Number needed to harm NNH the last sentence should read Thus on average 25 people would need to be treated for one year for one person to experience a harmful event 1 in 25 people 4% The downloadable file was corrected on 6 September 2024 https://doi.org/10.1007/978-1-4939-9888-8_1

org 10 56759 ojsg8296 **Drug Hepatotoxicity, An Issue of Clinics in Liver Disease** Vinod K. Rustgi, 2016-11-16 Dr Rustgi has assembled the leading experts in the management of Hepatitis B to present the current treatment and clinical course for diagnosis and management of the disease. Articles are devoted to Drug metabolism in the liver, Mechanism of Liver Damage including the RUCAM scale, Drug induced acute liver failure, Epidemiology and genetic risk factors, Adverse drug reactions type A intrinsic or pharmacological or type B idiosyncratic, Pathology of injury including phenotypes, The clinical course of drug induced liver disease, Environmental factors of drug hepatotoxicity, Newer agents in drug hepatotoxicity, Drug hepatotoxicity herbal products, Drug hepatotoxicity models including human on a chip and zebrafish, Acute and chronic liver failure from drugs, impact on the kidney and Management of acute hepatotoxicity including medical agents and liver support systems. Readers will come away with the cutting edge science behind the latest innovations in the treatment of Hepatitis B.

Drug-Induced Hepatotoxicity Ross Cameron, George Feuer, Felix de la Iglesia, 2012-12-06 The advances in science and medicine we are now experiencing are unprecedented and exciting. Life expectancy is prolonged and quality of life is much improved. We learn of fabulous new discoveries made at the bench or the bedside every week. Many diseases have been totally eliminated, others can be significantly improved by new therapeutic formulations. Much of the success can be attributed to a better understanding of disease processes and the specific targeting of new and more effective medications. As is the case in many areas of successful human endeavour, there can be a downside. In the case of drugs and chemicals, it is their adverse effects which are of concern. Of course, every effort is made to devise medications that are safe, and the need to elucidate and understand mechanisms are crucial, yet adverse effects remain a problem. They can be unpredictable and diverse. Drugs have been shown to induce virtually the whole gamut of human liver pathology from acute fulminant hepatitis to chronic active hepatitis to cirrhosis and even malignancy. Hence the possibility of adverse drug effects must be considered in the differential diagnosis of many patients with liver disease. This is well recognized and is very important; indeed, removal of the offending agent can often lead to reversal of the adverse effect. This is an area of hepatology where we can really make a difference.

Drug-Induced Liver Disease Neil Kaplowitz, Laurie D. DeLeve, 2013-04-18 This field has shown tremendous growth in recent years, primarily due to the recognition that drug induced liver disease is the most common cause of liver failure and one of the major contributors to the withdrawal of drugs developed by the pharmaceutical industry. *Drug Induced Liver Disease* 3rd edition is a comprehensive reference that covers mechanisms of injury, diagnosis and management, major hepatotoxins, regulatory perspectives and much more. Written by highly respected authorities, this new edition is an updated and definitive reference for clinicians and scientists in academia, the pharmaceutical industry and government settings. This book contains 4 new chapters on key topics in the area and provides a current and extensive review of the latest developments concerning the toxicology, pharmacology, genetics and immunology of drug induced liver disease. A multi-authored reference work written by leading clinical, academic and industry experts in drug induced liver disease. Contains

four new chapters on key areas in the field including one on worldwide drug induced liver injury networks Each chapter has been updated to address the latest research and findings in the field and 16 new chapter authors have been added to this new edition Includes coverage of the basic clinical and practical aspects of drug induced liver disease to provide the single most comprehensive reference on the subject **Drug-Induced Liver Disease** Neil Kaplowitz,2002-10-16 Featuring more than 4100 references Drug Induced Liver Disease will be an invaluable reference for gastroenterologists hepatologists family physicians internists pathologists pharmacists pharmacologists and clinical toxicologists and graduate and medical school students in these disciplines **Drug-Induced Hepatotoxicity** Ross Cameron,George Feuer,Felix de la Iglesia,2011-10-17 The advances in science and medicine we are now experiencing are unprecedented and exciting Life expectancy is prolonged and quality of life is much improved We learn of fabulous new discoveries made at the bench or the bedside every week Many diseases have been totally eliminated others can be significantly improved by new therapeutic formulations Much of the success can be attributed to a better understanding of disease processes and the specific targeting of new and more effective medications As is the case in many areas of successful human endeavour there can be a downside In the case of drugs and chemicals it is their adverse effects which are of concern Of course every effort is made to devise medications that are safe and the need to elucidate and understand mechanisms are crucial yet adverse effects remain a problem They can be unpredictable and diverse Drugs have been shown to induce virtually the whole gamut of human liver pathology from acute fulminant hepatitis to chronic active hepatitis to cirrhosis and even malignancy Hence the possibility of adverse drug effects must be considered in the differential diagnosis of many patients with liver disease This is well recognized and is very important indeed removal of the offending agent can often lead to reversal of the adverse effect This is an area of hepatology where we can really make a difference *Advances in drug-induced diseases* Yao Liu,Jia-bo Wang,Miao Yan,Linan Zeng,Maxine Deborah Gossell-Williams,Patricia Moriel,2023-05-03 Drug-Induced Hepatotoxicity S. Anuras,1996-04-04 With Contributions by numerous contributors *Drug-induced Diseases* James E. Tisdale,Douglas A. Miller,2010 Since the first edition of this book was published in 2005 drug therapy has seen both breakthrough advances and sobering setbacks The changes will continue That's why every health care professional hospital and health system pharmacy and medical school needs this invaluable reference It will help you detect prevent and manage drug related diseases And also remind you to always ask yourself the increasingly critical question Could this disease be drug related Drug-induced Liver Toxicity Minjun Chen,Yvonne Will,2018 *The Chemotherapy Source Book* Michael Clinton Perry,2008 The Chemotherapy Source Book Fourth Edition pulls together all the current information on the chemotherapeutic management of cancer patients including choice of chemotherapeutic agents use of combinations and toxicity of individual drugs Organized by disease site the book brings together pharmacologic and patient management information in one source that clinicians can consult for any question encountered in the delivery of chemotherapy This updated Fourth Edition includes new drugs as well as new

indications for older drugs Content has been streamlined to provide essential information more quickly for the busy practitioner Plus this edition is softcover for greater portability and convenience

Modern Concepts of Acute and Chronic Hepatitis G. Gitnick, 2012-12-06 The literature of medicine continues to expand at a remarkable pace The number of papers and monographs published has increased dramatically in the past five years Nowhere has this increase been as dramatic as in the field of acute and chronic hepatitis Why then should there be still another book Despite the sheer volume of words published it is still difficult to find in anyone volume a compilation of all of the most significant work Most monographs have considered either chronic or acute hepatitis not both Few works have addressed both the clinician and the basic scientist This book addresses both of these audiences and considers both of these diseases It was designed to provide an authoritative but concise assessment of our changing concepts of acute and chronic hepatitis It covers what is currently known and based on the most convincing research believed about these diseases To fulfill this ambitious goal only authors with international reputations in their fields of expertise were invited to contribute In the evolution of our current thoughts on the pathogenesis and management of acute and chronic hepatitis our ideas have changed several times This book presents the facts as they are known today and in areas where all the facts are not established presents the well founded opinions of those considered to be authorities The authors present established and usually confirmed data and do not deal extensively with areas of speculation or unconfirmed material

Foye's Principles of Medicinal Chemistry Thomas L. Lemke, David A. Williams, 2008 The Sixth Edition of this well known text has been fully revised and updated to meet the changing curricula of medicinal chemistry courses Emphasis is on patient focused pharmaceutical care and on the pharmacist as a therapeutic consultant rather than a chemist A new disease state management section explains appropriate therapeutic options for asthma chronic obstructive pulmonary disease and men's and women's health problems Also new to this edition Clinical Significance boxes Drug Lists at the beginning of appropriate chapters and an eight page color insert with detailed illustrations of drug structures Case studies from previous editions and answers to this edition's case studies are available online at thePoint

Toxicology of the Liver Gabriel L Plaa, WR Hewitt, 1998-02-27 This second edition looks at the physiologic biochemical and morphologic characteristics of hepatotoxicity and includes an analysis of techniques in molecular biology and immunochemistry among others contributing to the growth in understanding of the toxic events involved It focuses on clinical characterization of chemical hepatotoxicity

GI/Liver Secrets Plus: First South Asia Edition - E-book Peter R. McNally, 2016-07-28 Stay up to date on today's most common GI and liver disorders and their management with GI Liver Secrets Plus This enhanced medical reference book is an excellent resource for understanding the physiology and therapy in hepatic and digestive disease Whether preparing for an exam or quickly checking a clinical question the user friendly Secrets Series style makes this book a valuable addition to your library Easily locate important information with bulleted lists tables boxes short answers and a highly detailed index to expedite reference

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Drug-Induced Liver Injury, 2019-07-13 Drug Induced Liver Injury Volume 85 the newest volume in the Advances in Pharmacology series presents a variety of chapters from the best authors in the field Chapters in this new release include Cell death mechanisms in DILI Mitochondria in DILI Primary hepatocytes and their cultures for the testing of drug induced liver injury MetaHeps an alternate approach to identify IDILI Autophagy and DILI Biomarkers and DILI Regeneration and DILI Drug induced liver injury in obesity and nonalcoholic fatty liver disease Mechanisms of Idiosyncratic Drug Induced Liver Injury the Evaluation and Treatment of Acetaminophen Toxicity and much more Includes the authority and expertise of leading contributors in pharmacology Presents the latest release in the Advances in Pharmacology series

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