

UPDATE ON DERMATOLOGIC DRUG THERAPY

Professor Jasna Lipozenčić and co-authors



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DEDICATION

We would like to dedicate this book to our patients who helped us to understand the meaning of dermatologic drug therapy, side effects on it and who have given us insights into how to design better research studies to deal with enormous knowledge for the dermatologic drug therapy.

To the memory of glorious 51-year history of Croatian Academy of Medical Sciences and those dermatologic forebears who were fascinated by drug allergy in the skin, who advanced knowledge of skin therapy and who cared for and about patients.

PREFACE

We are honored and pleased with the idea that Croatian Academy of Medical Sciences is organizer of Congress and a book „Update in Dermatological Drug Therapy”. The Contents presented in this book represent a scientific and professional challenge, dedicated to drug therapy.

Skin is the largest organ of our body, which with its appendages hair, nails, and glands has complex structure. The skin is permanently exposed to different environmental influence and is a mirror of internal diseases influence. According definition of the European Union of Medical Specialists (UEMS), Section of Dermatology and Venereology: “Dermatology is organ specialized that is responsible for the diagnosis and treatment (both medical and surgical) and prevention of diseases of the skin and subcutaneous tissue.” Medicine is a science, which integrates the current scientific knowledge on health and diseases, in this book, caused by drugs. We believe that today, more than ever before in the history of medicine, it is essential to achieve a good balance between science and humanity not letting technology engulfs the doctor-patient relationship, which is really at the core of medical practice.

Besides dermatovenerologists with a main role, there are important internal medicine specialists, immunologists, infectologists, gynecologists included with their knowledge on recognizing of drug side-effects. About 30% of patients have dermatologic problems in every day routine of family physicians.

Everyone has during lifetime an problem with a skin. Each patient or client is an individual and has different response to therapy, that is why we wanted to give them a practical knowledge on update on dermatological drug therapy and individual approach is needed. The progress in treatment of skin diseases in past decade is impressive as well as more and more new diagnostic tests, new classification, and modern therapies are available. Besides different topical agents, there are available more and more physiological remedies.

Treatment of skin disease has changed remarkably during the last 10 years. Thus, novel targets have been identified and specific drugs developed which directly interfere with or alter the processes. Many of these new agents are administered systematically, either orally or by subcutaneous injection. And yet, as with all forms of drug therapy, these highly efficacious agents can be associated with severe side effects and drug-induced toxicity. To understand

the etiopathogenetic mechanisms of drug induced as well as adverse events why a certain disease occurs and how to find the best cure for it. With the rapid development of novel therapeutics, there has been a major evolution in the clinical practice of dermatovenerology. In European countries, patients with skin disease are often treated as in-patients by dermatologists whereas in United States, this occurs only rarely and the patients are treated under Internal Medicine and dermatologists are consulted on their management. Throughout medical history and diagnostic approach, authors are on viewing the disease and how to help to patients. However, in the last few decades we have witnessed to the development of ever more and more the adverse drug reactions. The purpose of human medicine is always and before all to help the patients. Today we can do much more in terms of prevention of drug-induced diseases. Not many doctors have large experience with a certain drug and a type of drug hypersensitivity reactions. As drug hypersensitivity characteristically appears unexpectedly, patient – oriented research is difficult. Thus, person oriented, individual approach is welcomed. The aim is to provide a general view on this topic so that can find relevant information practicing physician, dermatologists, the allergologists, immunologists, pharmacologists, pharmacists, immunotoxicologists and pharmaceutical company officer. It combines pharmacology with antigen specific immunology and a concept of T cells stimulated by drugs. There is involved interdisciplinary group of physicians, and scientists who work together to better understanding these disease and drug hypersensitivity reactions. In this book, 48 of colleagues from various professions from Croatia, Europe, America, and Australia have created together with members of Croatian Academy of Medical Sciences uniform book conceived to address dermatologic management as well as most drug-induced changes. Personally, we are proud to be organizers of this prestigious team which promote this book, contributing to a update of medicine in third millennium. There is assembled on outstanding set of papers on conceptual basis data based research, novel therapeutic procedures that are based on understanding the pathophysiology of skin diseases and drug induced diseases from various medical specialties and other relevant fields authored by experts from Croatia and worldwide. Experts have reviewed all manuscripts carefully. We are thankful to publisher ing. Cindro, LaserPlus d.o.o. of Zagreb, Croatia to organize this book. We are grateful to all of authors for their experience and wisdom the refocusing of dermatologic drug therapy in content.

The issue is the final product of the efforts and cooperation of an extraordinary team. We offer our sincere thanks to the contributors who have giving their valuable time to ensure the success of this book.

Jasna Lipozenčić and Željko Reiner

ACKNOWLEDGEMENT

The idea for this book came from me, Jasna Lipozenčić as principle author. I am grateful to all contributors who made possible this book as prestige work of the Croatian Academy of Medicinal Sciences.

Professors Dunja Beritić and Tatjana Jeren were engaged and read through draft after draft and page proof after galley.

Professor Josip Čulig has overseeing every detail of the work at it being printed. Academician Reiner made valuable additions to the Preface.

Professor Branka Marinović her Department of dermatology in Zagreb supplied valuable with technical help and photographs that appear in the book.

Mrs. Gordana Dučković organizes the entire project in regard to all manuscripts and the more than hundred photograph that were screened and selected with finality. The all coworkers also participated in several of the intensive working processes during which the text was reviewed and finalizing.

Without this pleasant refuge for long productive hours, this book might never have never been written.

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ABBREVIATIONS

AD

Atopic Dermatitis

ADEs

Adverse Medication Effects

ADRs

Adverse Drug Reactions

AE

Adverse events

AED

AntiEpileptic Drugs

AGEP

Acute Generalized Exanthematic Pustulosis

AGW

AnoGenital Warts

AK

Aktinic Keratosis

ALA

AminoLevulinic Acid

APC

Antigen Presenting Cells

ASA

AcetylSalicylic Acid

BAT

Basophil Activation Test

BCC

Basal Cell Carcinoma

BD

Bowen Disease

BLs

Beta Lactams

BPG

British Photodermatology Group

CLA

Lymphocyte-Associated Antigen

CM

Contrast Media

COX

Cyclo-Oxygenase

CS

Cephalosporins

CTCL

Cutaneous T-cell Lymphoma

DES

DiethylStilbestrol

DIHS

Drug-Induced Hypersensitivity Syndrome

DLQI

Dermatology Life Quality Index

DRESS

Drug Rush with Eosinophilia and Systemic Symptoms

EAACI

European Academy of Allergy and Clinical Immunology

EBA

Epidermolysis Bullosa

ELISA

Enzyme-Linked ImmunoSorbent Assay

ELISPOT

Enzyme-Linked ImmunoSorbent Spot assay

EMLA

Eutectic Mixture of Local Anesthetics

FDA

Food and Drug Administration

FEIA

FluoroEnzyme ImmunoAssay

GM-CSF

Granulocyte-Macrophage
Colony-Stimulating Factor

HAART

Highly Active AntiRetroviral Treatment

HOCM

High-Osmolality Contrast Media

HPV

Human PapillomaVirus

ICM

Iodinated Contrast Media

ICS

Intracellular Cytokine Stain ing assay

IDEC

Inflammatory Dendritic Epidermal Cells

IDSA

Infectious Diseases Society of America

IDT

IntraDermal Test

INF

INterFeron

INL

International Normalized Ratio

IRF

Independent review facility

laBCC

Locally advanced Basal Cell Carcinoma

LC

Langerhans Cells

LE

Lupus Erythematosus

LED

Light Emitting Diodes

LGV

LymphoGranuloma Venereum

LOCM

Los-Osmolality Contrast Media

LTT

Lymphocyte Transformation Test

MAL

Methyl AminoLevulinic acid

MAO

MonoAmine Oxidase

mBCC

Metastatic basal cell carcinoma

MBT

Molecular Biologic Techniques

MC

Mollusca Contagiosa

MCV

MollusCipox Virus

MDM

Minor Determinant Mixture

MEL

Monochromatic Excimer Light

Mes

Medication Errors

MHC

Major Histocompatibility Complex

MDE

Masulopapular Drug Eruption

MPE

MaculoPapular Exanthema

MRSA

Methiciline Resistant *Staphylococcus aureus*

MSM

Men who have Sex with Men

MTZs

Microscopic Treatment Zones

NAAT

Nucleic Acid Amplification Test

NSAIDs

NonSteroidal AntiInflammatory drugs

OLL

Oral Lichenoid Lesion

OLP

Oral Lichen Planus

ORR

Objective response rate

OS

Overall survival

OTC

Over-the-Counter

PASI

Psoriasis Area and Severity Index

PDT

PhotoDynamic Therapy

PGA

Physician's Global Assessment

PID

Pelvic Inflammatory Disease

PPL

Penicilloil Polylysine

Pi

Pharmacologic interaction

PsA

Psoriatic Arthritis

PSF

Progression Free Survival

RCM

RadioContrast Media

SJS

Stevens-Johnson Syndrome

SPT

Skin Prick Test

STI

Sexually Transmitted Infections

TCI

Topical Calcineurin Inhibitors

TCRs

T Cell Receptors

TEN

Toxic Epidermal Necrolysis

TMP

TriMethylPsoralen

TMP-SMX

TriMetoPrim-SulfaMethoXazole

TNF

Tumor Necrosis Factor

WAO

World Allergy Organization



I

**INTRODUCTION
OF DERMATOTHERAPY**