Cataract Epidemiology

Developments in
Ophthalmology

Vol. 27

Series Editor Hedwig J. Kaiser, Basel

KARGER Basel • Freiburg • Paris • London • New York •
New Delhi • Bangkok • Singapore • Tokyo • Sydney

International Forum on Advanced Techniques in Lens and
Cataract Research, Kanazawa, June 6-8, 1995

Cataract Epidemiology

Volume Editors K. Sasaki, Uchinada
O. Hockwin, Bonn

47 figures, 3 in color, and 21 tables, 1997

KARGER Basel • Freiburg • Paris • London • New York •
New Delhi • Bangkok • Singapore • Tokyo • Sydney

Developments in Ophthalmology

Continuation of 'Bibliotheca Ophthalmologica', 'Advances in Ophthalmology', and
'Modern Problems in Ophthalmology'

Founded 1926 as 'Abhandlungen aus der Augenheilkunde und ihren Grenzgebieten' by
C. Behr, Hamburg and J. Meller, Wien

Former Editors: A. Brückner, Basel (1938-1959); H. J. M Wewe, Utrecht (1938-1962);
H. M. Dekking, Groningen (1954-1966); E B. Streijf, Lausanne (1954-1979);
J François, Gand (1959-1979); J van Doesschate, Utrecht (1967-1971);
M. J Roper-Hall, Birmingham (1966-1980); H Sautter, Hamburg (1966-1980);

Library of Congress Cataloging-in-Publication Data
International Forum on Advanced Techniques in Lens and Cataract Research (1995: Kanazawa-
shi, Japan)
Contents

Preface VII

Prevalence and Risk Factors of Cataract in India: A Review 1
Gupta, S.K. (New Delhi)

A Cataract Epidemiological Analysis of Patients Admitted during a 10-Year Period to a Teaching Hospital in Harbin, Northeastern China 6
Jing, Y.-G.; Zhang, L.; Wang, J. (Harbin)

Assessment of Lifetime Ocular Exposure to UV-B: The Melbourne Visual Impairment Project 9
McCarty, C.A.; Lee, S.E.; Livingston, P.M.; Taylor, H.R. (Melbourne)

Normal Aging Changes of the Scattering Light Intensity in Human Lens Measuring with Scheimpflug Photography 14
Shyn, K.H.; Lee, D.H.; Hong, N.S. (Seoul); Ro, S. H. (Pusan)

Prevalence of Blindness and Visual Impairment due to Cataract - Sofia Eye Survey 19
Vassileva, P. (Sofia); Gieser, S.; West, S. (Baltimore, Md.); Cholakova, T. (Sofia); Vitale, S. (Baltimore, Md.); Sheffield, V. (Bethesda, Md.)

Localization of Cortical Cataracts Examined through Photographic Images 25
Asano, K.; Sakamoto, Y.; Kojima, M.; Sasaki, K. (Uchinada)

A Current UV-B-Related Cataract Epidemiology Study in Japan 32

A New Grading System for Nuclear Cataracts - An Alternative to the Japanese Cooperative Cataract Epidemiology Study Group’s Grading System 42

Ultraviolet Dosimetry Utilizing a Mannequin Model 50
Sakamoto, Y.; Kojima, M.; Emori, Y.; Sasaki, K. (Uchinada)

Relationship between Pure Cortical Cataract Appearance and the Wearing of Glasses. A Preliminary Report of a Case Control Study Performed on the
Subjects in the Noto Area, Japan 56
Katoh, N. (Tokyo); Ono, M. (Tsukuba); Fujisawa, K.; Kojima, M.; Sakamoto, Y.; Sasaki, K. (Uchinada)
Ocular Exposure to Environmental Light and Ultraviolet - The Impact of Lid Opening and Sky Conditions 63
Sliney, D.H. (Aberdeen Proving Ground, Md.)
Ultraviolet Radiation as Cataract Risk Factor - A Case Report 76
Müller-Breitenkamp, U; Hockwin, O. (Bonn); Siekmann, H. (Sankt Augustin);
Dragomirescu, V. (Remagen-Unkelbach)
Preliminary Study on Exposure Measurement of Ultraviolet Radiation 81
Ono, M. (Tsukuba)
An Epidemiological Survey of Cataract in China 89
Zhang, B.-x.; Gao, S.-q.; Tao, W (Shenyang)
Difference in the Grading and Type of Lens Opacification between Both Eyes Examined in a Population-Based Survey in Three Areas of Japan 95
Aging Changes of Lens Transparency in Subjects with Noncataractous Eyes102
Sasaki, H. (Uchinada/Tochigi); Kasuga, T. (Uchinada); Ono, M. (Tsukuba);
Sakamoto, Y.; Kojima, M. (Uchinada)

Author Index 109
Subject Index 110

Contents VI

Preface

In June 1995, the International Forum on Advanced Techniques in Lens and Cataract Research was held in Kanazawa, Japan. A part of this meeting was dedicated to the Studies of Cataract Epidemiology with special emphasis on cataract risk by ultraviolet radiation. This subject was co-organized with and sponsored by the National Institute of Environmental Studies of Japan. The papers collected in the present volume of Developments of Ophthalmology cover special aspects of cataract epidemiology of India, Northeastern China, Melbourne, Bulgaria, different regions of Japan, Korea, etc. Other contributions refer to the very important measurements of the individual ocular exposure to UV radiation; a new method for UV dosimetry using a mannequin model is also outlined. A few articles are dedicated to the problem of cataract classification with objective and reliable methods, a very important background for all epidemiological studies. For the first time a case report describes a cataract induced by UV radiation as a professional accident.
It has already become a tradition that the proceedings of the meetings on Cataract Epidemiology are published in Developments of Ophthalmology, we want to thank the publisher S. Karger AG, Basel, for the opportunity to publish again the articles presented in Kanazawa which demonstrate a continuation of the previous volumes 15/1987, 17/1989, 21/1991 and 26/1994.

Kazuyuki Sasaki
Otto Hockwin