

BMJ Open Royal College of Ophthalmologists' National Ophthalmology Database study of cataract surgery: report 8, cohort analysis of the relationship between intraoperative complications of cataract surgery and axial length

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ABSTRACT

Objectives. To describe the relationships between axial length and intraoperative complications in patients undergoing cataract surgery.

Design. Cohort analysis of the Royal College of Ophthalmologists' National Ophthalmology Database (RCOphth NOD).

Setting. 110 National Health Service Trusts in England, Health Boards in Wales, Independent Sector Treatment Centres and Guernsey.

Participants. 820 354 patients, aged 18 years or older, undergoing cataract surgery. Eligible operations were those from centres with at least 50 operations with a recorded axial length measurement and age at surgery between 1 April 2010 and 31 August 2019.

Interventions. Phacoemulsification where the primary intention was cataract surgery alone.

Outcome measures. Posterior capsule rupture (PCR) and other recorded intraoperative complications.

Results. 1 211 520 eligible operations were performed by 3210 surgeons. The baseline axial length was <21 mm (short eyes) for 17 170 (1.4%) eyes, 21–28 mm (medium eyes) for 1 182 513 (97.6%) eyes and >28 mm (long eyes) for 11 837 (1.0%) eyes. The median age at surgery was younger for patients with long eyes than those with short or medium eyes. The rate of any intraoperative complication was higher for short eyes than medium or long with complication rates of 4.5%, 2.9% and 3.3%, respectively ($p<0.001$). PCR occurred in 1.40% surgeries overall, and in 1.53%, 1.40% and 1.61% of short, medium and long eyes, respectively ($p=0.043$, not significant at the 1% level).

Conclusions. Overall PCR rates for cataract surgery in RCOphth NOD contributing centres are lower than previously reported and there is little change in PCR rates by axial length. Short eyes were more likely to have an intraoperative complication than medium or long eyes.

INTRODUCTION

Cataract surgery is one of the most commonly performed operations with almost half a

STRENGTHS AND LIMITATIONS OF THIS STUDY

- This analysis is from the largest Royal College of Ophthalmologists' National Ophthalmology Database dataset to date and the findings are representative of those anticipated in English, Welsh and Guernsey ophthalmic departments with data from traditional National Health Service hospitals and the independent sector.
- The results for each intraoperative complication including the subdivision of posterior capsule rupture are influenced by small event rates in a large sample.
- Almost half of patients had cataract surgery on both eyes, which introduces patient-level correlation that impacts on the statistical comparisons.
- There may also be reporting bias as clinicians are required to select the presence of ocular comorbidities and also report the occurrence of surgical complications.

million surgeries performed by the National Health Service (NHS) in England in 2019–2020.¹ Both first and second eye cataract surgery are cost-effective, and have significant indirect societal and health-economic advantages including greater social inclusion and participation, improvements in mental health, reducing falls and incidence of road traffic accidents.^{2–6}

The Royal College of Ophthalmologists' National Ophthalmology Database (RCOphth NOD) was established over a decade ago in the UK to provide a national audit service allowing comparisons of surgery outcomes and complication rates between units and surgeons, and also for research. A number of RCOphth NOD analyses have been published for cataract surgery including

Royal College Of Ophthalmologists Cataract Surgery Guidelines

**Alastair K. O. Denniston, Philip I.
Murray**



Royal College Of Ophthalmologists Cataract Surgery Guidelines:

Guidelines for Cataract Surgery Royal College of Ophthalmologists (London), 1995

The Ophthalmic Study Guide

Dorothy Field, Marina Forbes, 2016-05-23 This classic introduction to ophthalmology has been thoroughly revised and updated to reflect the changes in practice that have taken place since it was first published in 2009 In recent years an increasing variety of health professionals have been involved with the care of ophthalmic patients The aim has been to provide an efficient high quality and cost effective service to patients which utilises the skills of the multidisciplinary ophthalmic team This study guide offers both a basic introduction and a skills escalator for nurses and other health professionals Those who make use of its content and use the To do panels for reflection and research will develop their knowledge and skills more quickly and acquire good habits of self assessment and self directed learning The simple questions at the end of each chapter can be used for self testing or as a basis for questions that mentors can ask their students The content is deliberately restricted to the basics in terms of the areas chosen though they are all covered in reasonable depth Students are encouraged to use the skills checklists at the end of the book to document their personal progress and validate their developing practice These will provide useful evidence for annual performance appraisals

Oxford Handbook of Ophthalmology Alastair K. O. Denniston, Philip I. Murray, 2018-10-25 Fully revised and updated throughout the fourth edition of the Oxford Handbook of Ophthalmology now includes free access to the ophthalmic online media bank a selection of high quality clinical images and videos for a wide breadth of key ophthalmic diseases Clear concise and practical this handbook provides immediate access to the detailed clinical information you need in casualty clinic theatre and on the wards The core of the book comprises a systematic synopsis of ophthalmic disease directed towards diagnosis interim assessment and ongoing management Assessment boxes for common clinical conditions and algorithms for important clinical presentations illustrate this practical approach The information is easily accessible presented in a clear format with areas of importance highlighted Key sections for the trainee include Clinical Skills Aids to Diagnosis Investigations and their Interpretation Perioperative Care Theatre Notes and Therapeutics The wider practise of eye care is supported by expanded chapters on Refractive Ophthalmology Vision in Context Evidence Based Ophthalmology and Resources for Ophthalmologists Now including newer treatments across a range of specialities such as SMILE gene therapy and retinal prostheses as well as greater emphasis on the evidence underlying current clinical practice and guidelines this handbook has never been more essential for all those working in eye care Whether you want to learn about patient reported outcomes identify a surgical instrument interpret a statistical test or diagnose and treat ophthalmic emergencies you will find it here Whatever your role in caring for patients with eye disease ophthalmologist optometrist orthoptist ophthalmic nurse or other health profession discover for yourself why this handbook has become the go to resource for tens of thousands of eye care professionals around the world

Viva and OSCE Exams in Ophthalmology Timothy H. M. Fung, Winfried M. K. Amoaku, 2020-06-25 This book

provides a core revision resource for candidates sitting part 2 of the FRCOphth and other UK and international qualifying exams such as the FRCS MRCS FAMS and FRANZCO Clear didactic chapters logically outline the requirements for Structured Vivas and Objective Structured Clinical Examination with Do's and Don'ts for each section Viva and OSCE Exams in Ophthalmology A Revision Study Guide fills the need for a study companion that contains all the required resources in a single usable guide for candidates sitting fellowship exams to become a registered ophthalmologist or surgeon Ophthalmic specialist trainees specialty doctors staff grades and associate specialists who wish to become a fellow will find this book to be an essential guide to revising for oral and clinical based exams in ophthalmology

Principles and Practice of Ophthalmic Anaesthesia Jaichandran V V,,Chandra M Kumar,Jagadeesh V,2017-05-31 This book is a comprehensive guide to ophthalmic anaesthesia detailing different types of anaesthesia techniques subsequent effects and possible complications Divided into six sections the book begins with basic clinical knowledge including anatomy and physiology and the effects of ocular medications The following sections examine the techniques and uses of regional anaesthesia concluding with a chapter on emergencies in ocular surgery The second half of the book covers general anaesthesia covering the physiological and pharmacological effects on the eye and its use for numerous subspecialty surgical procedures including for examination and diagnosis for paediatric surgeries vitreoretinal surgery glaucoma emergency eye surgery and more The final section is dedicated to the causes and management of chronic ophthalmic pain Each chapter features an abstract and nuggets of wisdom providing useful points on the topic Nearly 200 clinical images and tables enhance learning Key Points Comprehensive guide to ophthalmic anaesthesia covering types techniques effects and complications Discusses both regional and general anaesthesia for numerous ocular surgeries Includes chapters on emergencies in ocular surgical procedures Each chapter includes an abstract and nuggets of wisdom

Cataract Surgery Christopher Liu,Ahmed Shalaby Bardan,2021-01-04 This book provides ophthalmic professionals and trainees with practical guidance on how to perform cataract surgery efficiently From patient satisfaction and risk stratification to safely performing cataract surgery it addresses specific problems and offers clear solutions The respective chapters address the health economy surgical outcomes staff satisfaction surgical training and research Cataract surgeons seeking to further develop their clinical skills will find this book an indispensable resource in their day to day practice Written by respected laser and lens refractive surgeons this book will provide professionals and trainees with valuable new approaches to cataract surgery and patient management

Oxford Handbook of Anaesthesia Keith Allman,Iain Wilson,Aidan O'Donnell,2016-01-07 Now on its fourth edition the Oxford Handbook of Anaesthesia provides authoritative concise guidance on all aspects of anaesthesia Evidence based up to date and clinically focused it is indispensable for both anaesthetic trainees and experienced practitioners Building on the award winning success of previous editions the Oxford Handbook of Anaesthesia is as relevant and important as ever Fully revised with the latest guidelines drugs and procedures this book ensures readers have the most up to date knowledge easily to hand

The fourth edition includes new content on obesity surgery colloids vs crystalloids and enhanced recovery as well as intraoperative fluid management new anticoagulants BIS updates pulse contour analysis and much more Wherever you are on your career path in anaesthesia this handbook is your essential companion Cataract Surgery Royal College of Ophthalmologists, Nick Astbury, 2001 Issues in Ophthalmic Practice Sue Watkinson, 2009 Ophthalmic nurse practitioners face many challenges today owing to the effects of demographic change advancing technology and research and increasing government legislation This book contains a wealth of information related to the nursing management of people with various ophthalmic conditions At the same time it encourages ophthalmic nurses and allied healthcare professionals to think critically about the wider political and professional issues impacting on their everyday practice The last three decades have seen major advances in the care of people with ophthalmic conditions in all ages *Moorfields Manual of Ophthalmology* Timothy L. Jackson, 2008-01-01 All the information you need is provided in this comprehensive clinical yet concise and practical handbook Inside you will find up to date tutorial style information on commonly performed examination skills and interpretation of investigations Key information is given at a glance ideal for the busy practitioner or as a revision aid for the trainee Well organized clear and concise text accompanies full colour clinical photographs The book is unique in that it provides explicit details on the day to day management of eye conditions the reader is expertly guided through both the diagnosis and management of disease conditions Each chapter also contains guidelines written exclusively for the general practitioner and primary care provider Optometrists will also find this to be an indispensable guide as pathologies found in every day practice will be included enabling the practitioner to give patients qualified information about their symptoms In depth sections on clinical examination skills essential for clinical practice and professional examinations A purely practical ophthalmology guide The use of images where these are appropriate rather than for all conditions or none A book written by a staff in their area of subspecialty interest rather than a few authors attempting to cover a wide range of subjects Tutorial style information on the commonly performed investigations and procedures Specific notes for primary care staff in particular opticians **Ophthalmic Surgery: Principles and Practice E-Book** George L. Spaeth, Helen Danesh-Meyer, Ivan Goldberg, Anselm Kampik, 2011-09-01 Ophthalmic Surgery edited by Drs George Spaeth Helen Danesh Meyer Ivan Goldberg and Anselm Kampik provides the detailed full color step by step guidance you need to master essential ophthalmic surgery procedures The international team of expert editors and contributors present coverage of the latest surgical developments and video demonstrations of key techniques across subspecialties including cataract cornea refractive glaucoma oculoplastic extra ocular muscle vitreoretinal and ocular tumor procedures What's more the fully searchable text procedural videos and a downloadable image gallery are all online at www.expertconsult.com making this multimedia resource the key to performing confidently in the operating room Refer to the most important steps in each procedure quickly and easily with an appendix of step by step hand notes Perform a wide variety of procedures with confidence using

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Ophthalmology, E-Book Myron Yanoff, Jay S. Duker, 2022-11-06 Through five highly regarded editions Ophthalmology by Drs Myron Yanoff and Jay S Duker has remained one of the premier texts in the field providing authoritative guidance on virtually any ophthalmic condition and procedure you may encounter The fully revised 6th edition of this award winning title continues to offer detailed superbly illustrated content from cover to cover with extensive updates throughout to keep you current with the latest advancements and fundamentals throughout every subspecialty area in the field An easy to follow templated format convenient single volume and coverage of both common and rare disorders make this title a must have resource no matter what your level of experience Offers truly comprehensive coverage including basic foundations through diagnosis and treatment advances across all subspecialties genetics optics refractive surgery lens and cataract cornea retina uveitis tumors glaucoma neuro ophthalmology pediatric and adult strabismus and oculoplastics Features streamlined templated chapters a user friendly visual layout and key features boxes for quick access to clinically relevant information and rapid understanding of any topic Contains four new chapters covering Phototherapeutic Keratectomy IOL Optics Bag in the lens Cataract Surgery and Capsulectomy Modern devices apart from FLACS Includes a fully revised and updated chapter on refractive surgery screening and corneal imaging as well as an expanded chapter on corneal cross linking Provides up to date information on the latest advances in the field including new therapies for retinoblastoma such as intravenous and intraarterial chemotherapy less common retinal tumor simulators of retinoblastoma OCT Angiography glaucoma stents new drug delivery platforms IOL optics phototherapeutic keratectomy intraocular pressure monitoring and more Includes more than 2 000 high quality illustrations and an expanded video library with more than 60 clips of diagnostic and surgical techniques including new videos of nystagmus Contains updated management guidelines for central retinal artery occlusions CRAO Provides fresh perspectives from new section editors Drs Carol Shields and Sumit Sam Garg Enhanced eBook version included with purchase Your enhanced eBook allows you to access all of the text figures and references from the book on a variety of devices

Advanced Training in Anaesthesia Jeremy

Prout,Tanya Jones,Daniel Martin,2014 Advanced Training in Anaesthesia is authored by both trainees and specialists in order to create an authoritative yet accessible text Containing everything candidates need to know to pass this final major hurdle in anaesthetic training this book is ideal for exam revision Suggestions for further reading are included for candidates wishing to read around the subjects Topics in applied basic science are presented in asystems based format as laid out in the syllabus set by the Royal College of Anaesthetists to allow for easy navigation and structured learning and revision Pediatric

Cataract Surgery M. Edward Wilson,Rupal H. Trivedi,2014-01-06 Although uncommon the occurrence of cataracts in very young patients can result in significant impairment and can lead to blindness This practical guide delivers need to know information to help clinicians treat pediatric patients with cataracts with a range of therapies and essential guidance on the management of complications Explore the only reference devoted exclusively to pediatric cataract management 13 new chapters highlight the latest advances in bilateral cataract surgery intraocular heparin treatment treatment of traumatic cataracts pre and postoperative management and techniques appropriate for patients in developing nations 4 hours of online procedural video accompany the text giving readers a clinician s view of essential procedures A great way to refine technique improve outcomes avoid pitfalls and manage potential complications Quick reference format helps readers locate vital information at a glance **Ophthalmic Care** Janet Marsden,2017-02-16 Written by an international team of ophthalmic

practitioners this authoritative book is a vital resource not only for ophthalmic professionals but for any healthcare professional who cares for patients with eye problems In the ten years since the first edition was published practice has moved on as has the evidence for practice This second edition draws on the passion and goodwill of the original team of authors complemented by other colleagues to fully revise and update the text in line with new findings new practice and new and exciting treatments The book is broadly divided into three sections The first section considers the structure and function of the eye as well as the basic principles of ophthalmology and eye examination The second section considers patient care in diverse settings as well as work related issues and patient education It also includes two entirely new chapters on eye banking and global eye health The third section takes a systematic approach to patient care working from the front to the back of the eye discussing some of the common disorders affecting each structure such as the lens or cornea or group of structures such as the eyelids or lacrimal drainage system The book concludes with a very useful glossary of ophthalmic terms Some aspects of practice discussed in the text are of necessity UK based but these are clearly indicated and wherever possible principles rather than specifics are addressed and readers are directed to local policies and interpretations The first edition of this book became a core text for ophthalmic nursing in particular and for the education of ophthalmic nurses across the world This new edition will provide a comprehensive up to date evidence based resource for all ophthalmic healthcare professionals Contents include Physiology of vision Optics Pharmacology Examination of the eye Visual impairment Patient education Work and the eye Care of the adult ophthalmic patient in an inpatient setting The care of the

child undergoing ophthalmic treatment Developments in day care surgery for ophthalmic patients Ophthalmic theatre nursing The care of patients presenting with acute problems Eye banking Global eye health The eyelids and lacrimal drainage system The conjunctiva The cornea The sclera The lens The uveal tract The angle and aqueous The retina and vitreous The orbit and extraocular muscles Visual and pupillary pathways and neuro ophthalmology The eye and systemic disease

Oxford Handbook of Ophthalmology Alastair Denniston, Philip Murray, 2014-10-23 Fully revised for its third edition the Oxford Handbook of Ophthalmology is a concise systematic guide to all aspects of diagnosis assessment and ongoing management of ophthalmic diseases and conditions Closely aligned with the curriculum for the ophthalmic postgraduate exams and containing the most up to date clinical guidance and practical advice this is the essential resource for all those caring for ophthalmic patients Covering the key information for both trainees and specialists from clinical methods and the use of ophthalmic instruments to basic perioperative care and advanced life support protocols It includes new chapters covering laser procedures and theatre notes as well as new sections on emerging technologies such as adaptive optics and gene therapy for retinal diseases With expert advice the latest clinical guidance and its easy reference format this unique resource provides immediate access to the information you need when you need it

Surgical Techniques in Ophthalmology (Pediatric Ophthalmic Surgery) Ashok Garg, 2010-02-28 Part of an eight volume series each focusing on a subspecialty Cataract Surgery Refractive Surgery Oculoplasty and Reconstructive Surgery Corneal Surgery Glaucoma Surgery Retinal Surgery Strabismus Surgery Paediatric Ophthalmic Surgery This book covers all types of cataract surgical techniques in a step by step easy to follow format It serves as a ready reference of ophthalmic surgeries demonstrated by international experts and includes comprehensive tips on the efficient use of various surgical techniques

Perioperative Practice Case Book Hannah Abbott, Stephen Wordsworth, 2016-08-16 This case book is the ideal text for Operating Department Practitioners ODPs as well as student ODPs and nurses preparing to work in perioperative care Delivering individualised holistic and evidence based care can be challenging in the perioperative setting requiring the practitioner to apply specialist clinical knowledge to each individual patient This text presents 20 interactive case studies that will support the reader in assimilating a wide range of professional knowledge in order to develop a comprehensive plan of care for patients they encounter The practical cases Demonstrate how care will vary depending on the patient's physiological assessment and their personal social cultural and emotional needs Will consolidate the reader's learning around pathophysiology pharmacology assessment skills and clinical skills Include common clinical procedures as well as those that are more complex and require a deeper analysis of the evidence in order to improve patient care Use Stop and Think boxes to encourage readers to reflect on key points within the case study in order to develop their own knowledge and assist in their CPD This text will support all learners at both pre and post registration level as they develop their knowledge of perioperative care Its goal is to help the practitioner deliver excellent and confident care in perioperative practice and in

other healthcare settings Although clearly targeted at the student Operating Department Practitioner Abbott and Wordsworth have produced a learning resource that any learner in the perioperative environment will find both informative and a useful learning aid The editors have set out the twenty patient case studies in a sequence that allows the student to work through them as their course and competence progresses although students can dip into the case studies in any order that supports their current clinical placement The section introducing perioperative care is essential reading for any perioperative practitioner with an up to date introduction to the latest concepts of teamwork and human factors in patient safety Coupled with the patient centred focus of the case studies this provides any reader with an understanding of the changing approach to patient care in the perioperative environment Bill Kilvington President College of Operating Department Practitioners UK I have read this book several times and found that the chapter contents are excellent This book will be useful for ODPs and theatre nurses it will enhance their knowledge and skills and may also enhance their abilities to work in operating departments and care well for patients The book covers preoperative care intraoperative care and postoperative care which is essential for all practitioners working in operating departments The content of this book is very informative and will be of great use to both students and qualified practitioners I find it very impressive and I envisage it to be very useful to all theatre practitioners Paul Wicker formerly Head of Perioperative Studies Edge Hill University UK and Visiting Professor Nanjing University China

Package of eye care interventions World Health Organization, 2022-05-12

A Handbook of Ophthalmic Standards and Procedures Lynn Ring, Miriam Okoro, 2016-09-20 This handbook of ophthalmic nursing standards and procedures has been developed to assist healthcare professionals working in a wide range of ophthalmic settings and also to provide the patient with safe and consistent ophthalmic nursing care Ophthalmic care is constantly changing and progressing with new technical roles being introduced all the time The authors discovered within their own unit that new healthcare professionals both registered and non registered were often shown slightly different ways of doing things by more experienced members of the team which led to confusion They felt it was a bit like driving bad habits can easily slip into everyday practice For this reason they developed standards of care to act as a benchmark for the ophthalmic practitioner Written in response to a widely expressed need for greater clarity and consistency this highly regarded book offers a comprehensive one stop resource for all ophthalmic practitioners whether they are registered nurses healthcare assistants or ophthalmic technicians This new edition has been revised to make the text even clearer and bring all the guidance up to date covering communication visual acuity testing ocular medications the ophthalmic outpatient department biometry the ophthalmic accident and emergency department the slit lamp and tonometry additional standards using specific equipment and suggested documentation for providing evidence of development and competence Sections include Communication Visual Acuity Testing Ocular Medications The Ophthalmic Outpatient Department Biometry The Ophthalmic Accident and Emergency Department Slit Lamp and Tonometry Additional Standards Using Specific Equipment

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