DC Dutta's
Textbook of
OBSTETRICS

including
Perinatology and Contraception
OTHER BOOKS BY THE SAME AUTHOR

- Textbook of Gynecology
- A Guide to Clinical Obstetrics and Gynecology
- Bedside Clinics & Viva-voce in Obstetrics and Gynecology
- Master Pass in Obstetrics and Gynaecology
- Emergencies in Manipulative and Operative Obstetrics
DC Dutta’s
Textbook of
OBSTETRICS
including
Perinatology and Contraception

Eighth Edition

DC DUTTA
MBBS, DGO, MO (CaL)
Professor and Head, Department of Obstetrics and Gynecology
Nilratan Sircar Medical College and Hospital, Kolkata, India

Edited by
HIRALAL KONAR
(HONS; GOLD MEDALIST)
MBBS (CaL), MD (PGI), DNB (INDIA) 
MNAMS, FACS (USA), FRCP (LONDON)
Chairman, Indian College of Obstetricians and Gynecologists
Professor, Department of Obstetrics and Gynecology
Calcutta National Medical College and CR Hospital, Kolkata, India
One-time Professor and Head, Dept., Obst. & Gyne.
Midnapore Medical College and Hospital, West Bengal University of Health Sciences, Kolkata, India
Rotation Registrar in Obstetrics, Gynecology and Oncology
Northern and Yorkshire Region, Newcastle-upon-Tyne, UK
Examiner of MBBS, DGO, MD and PhD of different Indian universities
and National Board of Examination, New Delhi, India

The Health Sciences Publisher
New Delhi | London | Philadelphia | Panama
Dedicated to

The students of obstetrics
past and present
Preface to the Eighth Edition

DC Dutta’s Textbook of Obstetrics is in service to the medical fraternity for the last 31 years. It primarily aims at the medical students, trainee residents, practicing doctors and the midwives. It has evolved to provide comprehensive and updated information in a concise and easy-to-read format. The eighth edition has come out with an international standard to meet the overwhelming demand in many parts of the world. All the chapters have been extensively revised and strategically reorganized. Medical advances up to the time of publication have been incorporated. Contemporaneous guidelines from different professional and academic organizations like RCOG, ACOG, WHO, FIGO, NICHD, CDC, NICE, ICOG and DIPSI are provided. Management options based on experience, derived from large obstetric services are also mentioned. This is particularly so in a situation where no evidence exists or it is difficult to follow due to limitation of resources. Objective of this edition is to provide current cutting edge information, to enable the candidates to qualify the examination in India and its equivalents internationally.

Dutta’s eighth edition in its fully coloured format is profusely illustrated with a total number of 320 line drawings, sketches and photographs. In recognition of the advanced technology, the book provides sonograms, including Doppler studies, M R Images, microphotographs, data graphs and laparoscopic images. All these are in most vivid colors. Practical obstetrics (Chapter 42) with a total number of 52 high-quality photographs of instruments, specimens, sonograms, M R Images and drugs is of immense value, specifically for the practical part of the examination. The total information in Chapter 42 amounts to a mini textbook-cum-colour atlas in obstetrics.

For easy text reference and reading, contents and index have also been expanded. A list of abbreviations and a few updated reviews with websites are provided. The uniqueness of this text lies in its presentations, which are simple, lucid and unambiguous. Presentation of summary tables, algorithms and key-points for each chapter are a special attraction. These are for quick revision and recapitulation before the examination.


I had the opportunity to visit many of the medical institutions in this country and abroad. The feedback that I received from the teachers and students was invaluable. Many of these suggestions have been addressed to in this edition.

I do hope this comprehensive textbook will continue to be of immense educational resource to the readers as ever.

I am grateful to all who have taught me, most of all the patients and my beloved students.
According to the author’s desire, the book is dedicated to the **students of obstetrics—past and present**, who strive continuously to improve maternal and newborn's health, wherever they work.

P-13, New CIT Road  
Kolkata – 700 014  

Hiralal Konar
Over the years, there was an absolute dearth of a single comprehensive textbook of obstetrics, worth to be prescribed to the students. Moreover, of the textbooks currently available, most have been written with an orientation for the developed countries.

Being constantly insisted and hard-pressed by my beloved students, I ultimately decided to write a compact, comprehensive and practically oriented textbook of obstetrics. It is an attempt to encourage the students to learn obstetrics in a comparatively easy way. The aim was to emphasize the simplicities rather than complexities of knowledge. The book is written in a clear and concise language and in author’s own style, which holds the reader’s interest. Controversies are avoided and the management of the obstetrical problems is being highlighted with the facilities available to most of the third world countries. Extensive illustrations and flow charts (schemes) have been used as and when needed to add lucidity and clarity to the subject and to emphasize the practical nature of the book.

Although the book has been written primarily for the undergraduates, it should also prove to be useful to nurses (midwives), those aspiring for diploma and postgraduate degrees in obstetrics and also to the practicing obstetricians. I, however, do not consider this book to be an ideal one but a humble attempt has been made to remove the bottlenecks, as far as possible, of the books available to the students at present.

Acknowledgments: Very little of what is worthwhile in this book could not have been brought to publication without the generous cooperation, advice and assistance of many of my colleagues, seniors and juniors.

Dr BN Chakravarty, MBBS, DGO, MO (CaL), FRCOG (Eng.), Professor, Dept. of Obst. and Gyne., Nilratan Sircar Medical College, Calcutta; Dr KM Gun, MBBS, DGO, MO (CaL), FRCOG (Eng.), FRCS (Edin.), FACS, Professor, Dept. of Obst. and Gyne., Medical College, Calcutta; Dr Santosh Kr Paul, MBBS, DGO, MO (CaL), Reader, Dept. of Obst. and Gyne., Nilratan Sircar Medical College, Calcutta; Dr B Hore, MBBS, DA, MS (CaL), Professor and Head of the Dept. of Anesthesiology, North Bengal Medical College, Siliguri; Dr BC Lahari, MBBS, DGO, MO (CaL), FRCS (Edin.), FRCOG (Eng.), FACS (USA), FAMS (Ind.), Professor, Dept. of Obst. and Gyne., Medical College, Calcutta; Dr B Hore, MBBS, DA, MS (CaL), Professor and Head of the Dept. of Anesthesiology, North Bengal Medical College, Siliguri; Dr BC Lahari, MBBS, DGO, MO (CaL), FRCS (Edin.), FRCOG (Eng.), FACS (USA), FAMS (Ind.), Professor, Dept. of Obst. and Gyne., Medical College, Calcutta; Dr P Raha, MBBS, DTM & H, PhD, FCAL, Professor, Dept. of Pathology and Bacteriology, RG Kar Medical College, Calcutta; Dr J Mitra, MBBS, DGO, MO (CaL), FLCS, FIMS, FRCOG, Professor, Dept. of Obst. and Gyne., Institute of Postgraduate Medical Education and Research, Calcutta; Dr Aroti Roy, MBBS, FRCOG (Eng.), Professor, Dept. of Obst. and Gyne., Institute of Postgraduate Medical Education and Research, Calcutta; Dr N Roychowdhury, MBBS, DGO, MO (CaL), PhD, FRCS, FRCOG, FACS, FAMS, Professor, Dept. of Obst. and Gyne., Medical College, Calcutta; Dr N Chowdhury, MBBS, DGO, MO (CaL), Professor, Dept. of Obst. and Gyne., Institute of Postgraduate Medical Education and Research, Calcutta.
Dr NG Das, BSc, MBBS, MS (CaL), Professor and Head of the Dept. of Anatomy, Nilratan Sircar Medical College, Calcutta; Dr PK Talukdar, MBBS (CaL), DCH (Lond.), MRCP (Lond.), MRCP (Eng.), Lecturer, Pediatrics, NRS Medical College, Calcutta; Dr Subir Kumar Dutta, MBBS, DCP, MD (Path. & Bact.), Lecturer, Dept. of Pathology and Bacteriology, University College of Medicine, Calcutta; Dr Samar Rudra, MBBS, DGO, MRCOG (Eng.), Ramakrishna Mission Seva Pratishthan, Calcutta.

I have much pleasure in expressing my cordial appreciation to the house-surgeons, internees and students of Nilratan Sircar Medical College, Calcutta for all the help they have rendered in the preparation of the final drafts of the manuscripts, checking the proofs and in compiling the Index. Without their constant encouragement and active assistance, this book could never have been published. I express my sincere thanks to my publisher ‘Central Educational Enterprises’ for their sincere efforts in publishing the book within the stipulated period in spite of the adverse circumstances.

In preparing a textbook like this, I have utilized the knowledge of a number of stalwarts in my profession and consulted many books and publications. I wish to express my appreciation and gratitude to all of them, including the related authors and publishers.

As a teacher, I have learnt a lot from the students and more so while writing this book and, as such, I could not think of dedicating the book to anyone else but the students of obstetrics for which I express my gratitude.

Mahalaya
8th September, 1983
P-13, New CIT Road
Kolkata – 700 014

DC Dutta