COMPENDIUM OF RADIOGRAPHIC TECHNIQUES IN TRAUMA

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236 images

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DISCLAIMER

Compendium of Radiological Techniques is a book written within the field of medicine. The authors and editors being aware of the fact that medical field is an ever dynamic one, have made every effort to make available in this book accurate information as well as being up to date at publication. However, the dynamic nature of medical science and human nature that is vulnerable to error, it may be possible to find some technical inaccuracies, typographical or other forms of errors in this book. Readers are therefore advised that where in doubt should crosscheck the information against other published books/work that can help with accuracy and error diminution. The authors therefore disclaim responsibility for any errors or omissions and the consequences thereof for any reader that ignores the above advice.

FOREWORD

The human body is a complex anatomic structure that has three dimensions. These dimensions vary from person to person and ordinarily no single rule or formula would apply for everybody appropriately.

Imaging the body as in plain film radiography attempts to render these Three (3) dimensions in two dimensions. That adds another magnitude to the problem.

To get the best out of the process of imaging some common professional techniques could be employed, that could produce reliable, veritable images for most normal human beings. Where abnormality is encountered some modifications may be introduced to ensure optimized display of some structures in the body.

The foregoing has necessitated the production of a basic compendium to professionals who use, rely on or apply radiographic images in their work with, and on patients. The group of professional would include the medical student, the young post graduate doctor, the medical practitioner, the imaging scientist, and the trainee allied medical professionals as well as specialist doctors.

The compendium has been produced in a telegraphic or précis format to act as quick reminders of technique, in projecting parts of the body and also a suggestion as to what are the best views for exposing some parts of the body.

There is no attempt to make the book a detailed reference material on technique or encyclopaedia of radiographic technique. It is meant to be an insight into the intention of image projections and quick link between the image interpretation and structures observed on the films.

This book, which is a primary compilation of the editors, is a product of work done by them as residents in Germany.

We hope that our readers will find this book useful, worthy of frequent use, and easy to read. We will entertain suggestions for improvements contributions and remarks.

We want to remind readers that medicine remains an ever changing subject, a function of research clinical experience, opinion differences and peculiarities surrounding individual cases.

DR. EKEDIGWE J.E

PREFACE

A quick and accurate diagnosis of surgical diseases have become very complex to make in the present age of highly motorized high and city ways without an imaging radio diagnostic equipment. Accidents make the bulk of patients presenting at the A & E of all hospitals more so in the present age of excessive violence.

A simple and easy to use guide at requesting for radiographic investigations of victims is very apt at this time which is why this COMPENDIUM OF RADIOGRAPHIC PROJECTIONS IN TRAUMA was produced. A good radiographic image would give an exact diagnosis of fractures and done speedily, would be an added good.

With this in mind we did, a revisit of a work produced with some of my colleagues in 1981 in Germany by translating it. It was never meant for public consumption, which was not declared. Three of us through the advice of Chief Surgeon, Dr. med. habil. Hans KOEBLER of blessed memory, produced a simple pamphlet collection of several radiographic projections, which any of us could use to inform the radiographers of the projections we had in mind, even in the rush of accidents.

Dr. A. A. Chima, HOD Family Medicine and Dr. E. John Ekedigwe, HOD Radiology, and I revisited the work and produced this Compendium of Radiographic projections in Trauma. It will help a seasoned radiologist, surgeon traumatologist for whom it was conceived, and yes, also the Lecturers and Residents and Nurses. It was produced in a telegraphic style for all who are in dire need of time.

We gratefully remember Prof. BASSI AP Provost of College of Health Sciences who provoked this work and our printer friend Mr. Job H. I thank my wife and children who encouraged me to stick to the work at BHUTH and "finish it".

Dr. med. OSENI-MOMODU EDWIN

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INTRODUCTION

CONCEPTUALIZATION

This book started as an assignment to the first author by his late boss, Priv. doz. Dr. med. H. KOEBLER (Surgeon-in Chief of the Kreiskrankenhaus at Frankenberg/Eder, a Teaching Hospital of Philipp's University at Marburg/Lahn, Germany) of blessed memory who had asked him to develop a manual that can help residents to understand the processes and the various exposure techniques that goes into the production of x – ray images in trauma patients.

The first author Dr. Edwin Oseni – Momodu, had two other residents with him in general surgery to help him with this assignment, but of the three one later left to become a family physician, the second who completed his program as post graduate surgeon went on to complete his German national assignment with the military, later came back to the hospital and was deployed as an officer in the hospital administration. The first author had continued to work on and use the manual to assist him in his work as a resident in general surgery and even in his practice on completion of his General Surgery training in Germany.

After many years of practice as a general surgeon in Germany, he returned to Nigeria and went into private practice leaving this manual to entertain dust in the shelves because for him the manual has no further use.

About six years ago the first author returned to academics and later found three other friends and formed a research team. He had worked more closely with one of his research team members – Dr. George Chima – a family physician who felt strongly that this manual originally written in German language can be converted to English, worked upon and published as a text book.

The impetus for reworking the manual actually came after the current provost of the College of Medicine and Health Sciences; Bingham University; Professor Amos Paul Bassi, became aware of the work and encouraged the first author to work on it for publication; that the first and second author then came together and together found a third person a radiologist to rework the manual for publication.

The three authors worked together to translate the book from German language to English language, edited and arranged the manual to transform the book into what it has turned out to be.

LANGUAGE OF COMMUNICATION

This book has been written majorly for easy and quick referencing in a busy medical environment where prompt and accurate information access is needed for qualitative radiological imaging production decision making. The language of the book reflects this in that the radiological techniques represented in this book has been graphically presented while the indications and the procedure for each technique has been telegraphically written.

The authors have also carefully used simple and easy to understand terminologies and phrases for easy understanding by the readers. This makes the book a compendium but yet comprehensive book for the practicing radiographer, student of radio-graphical techniques and radiologists who will find this book an excellent instructional manual for teaching and learning radiological techniques.
Understanding of the indications and the procedural techniques of x-ray imaging is also invaluable for diagnosis, hence this book will be invaluable for practicing radiologists, general practioners /family physicians, surgeons and other physicians who have to read and interpret radiological images

ORGANIZATION OF THE BOOK

This book has been organized into ten chapters with an attempt to follow a cranio-caudal fashion. Each chapter begins with a chapter title and chapter contents so as to prepare the readers mind on what to expect in the chapter as well as quick and easy referencing.

In each of the chapters the readers find a graphical display of the radiologic techniques being taught in the chapter while the language of communication throughout this book is telegraphic. In this way the authors have graphically described the reference points and lines found in each anatomical region being represented in each chapter as well as telegraphically describing the various indications for the x – ray/radiologic techniques for that particular anatomic point of reference. This way the reader finds it easy to cover a wide range of x-ray trauma indications and exposure techniques within a short time without having to read large volume of information. This is particularly important when the reader is pressed for time for example when the reader wants to quickly go through some points before relevant examination.

The regions of the body whose radiologic techniques in trauma have been described in this book include:

Chapter 2 – Skull/head

Chapter 3 – Cervical Spinse/Neck

Chapter 4 – Thorax or chest

Chapter 5 – Thoracic vertebrae

Chapter 6 – Lumbar spine/lower back

Chapter 7– PELEVIX/waist

Chapter 8 – Upper extremities

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