# Physical Examination of a Surgical Patient

# Physical Examination of a Surgical Patient

Sabah Hassan Ketan Aldaragee

### UNIVERSITI MALAYSIA SABAH

Kota Kinabalu • Sabah • 2010 http://www.ums.edu.my/penerbit

A Member of Malaysia Scholarly Publishing Council (MAPIM)

### © Universiti Malaysia Sabah, 2010

All rights reserved. No part of this publication may be reproduced, distributed, stored in a database or retrieval system, or transmitted, in any form or by any means, electronics, mechanical, graphic, recording or otherwise, without the prior written permission of Penerbit Universiti Malaysia Sabah, except as permitted by Act 332, Malaysian Copyright Act of 1987. Permission of rights is subjected to royalty or honorarium payment.

Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

Aldaragee, Sabah Hassan Ketan, 1960-

Physical examination of a surgical patient / Sabah Hassan Ketan Aldaragee.

Includes index

Bibliography: p.

ISBN 978-967-5224-46-1

1. Diagnosis, Surgical. 2. Physical diagnosis. I. Title.

617.0232

Cover designer: Albert Frederick
Layout designer: Sarimah Mohd Tap
Typeface for text: Minion Pro
Text and leading size: 12/14.4 points
Printed by: Capital Associates Printing Press (S) Sdn. Bhd.

I dedicate this book to my wife Dr Dina for her support,

To my brothers,

To my lovely sons Mohammad Noor, Zain Al Abedean and Tariq,

To my attentive students,

To my patients,

To all those who have given their supports in bringing this book into view,

But above all, my parents.

# **CONTENTS**

List of Photos		vii
Preface		,
Introductio	on .	x
Chapter 1	History Taking	
Chapter 2	General Examination of the Patient	13
Chapter 3	Physical Examination of the Neck	19
Chapter 4	Examination of the Salivary Glands	27
Chapter 5	Examination of Cervical Lymph Nodes	31
Chapter 6	Examination of Thyroid Gland	39
Chapter 7	Examination of the Chest	63
Chapter 8	Examination of the Breast	67
Chapter 9	Examination of the Abdomen	73
Chapter 10	Examination of the Male External Genitalia	113
Chapter 11	Anorectal Examination	129
Chapter 12	Examination of Hernia	137
Chapter 13	Examination of the Lower Limbs	151
Chapter 14	Examination of the Veins of the Lower Limbs	161
Chapter 15	Examination of the Musculoskeletal System	179
Chapter 16	Examination of the Hand	187
Chapter 17	Examination of the Skin	191
References		201
Index		203

# LIST OF PHOTOS

Photo		Page
5.1	Examination of submental lymph nodes	32
5.2	Examination of submandibular lymp nodes	32
5.3	Examination of preauricular lymph nodes	33
5.4	Examination of posterior auricular lymph nodes	33
5.5	Examination of suboccipital lymph nodes	34
5.6	Examination of supraclavicular lymph nodes	34
6.1	Commencing the examination of the thyroid gland	40
6.2	General inspection in thyroid examination	41
6.3	Examination of the thyroid gland – inspection	42
6.4	Examination of the thyroid gland – watching thyroid movements	43
6.5	Examination of the thyroid gland – posterior approach	46
6.6	Palpation of the thyroid gland – anterior approach	47
6.7	Examination of the thyroid gland – palpation of the trachea	48
6.8	Palpation of the trachea by the little finger	49
6.9	Palpation on the other side of the trachea	50
6.10	Palpation of carotid pulsation	50
6.11	Percussion of the thyroid gland	53
6.12	Auscultation of the thyroid gland	53
6.13	Examination of the thyroid gland – Pemberton's sign	54
6.14	Examination of the thyroid gland	56
6.15	Examination of the thyroid gland – eye examination for lid lag and lid retraction	58
6.16	Examination of the thyroid gland – eye examination for convergence	58
6.17	Examination of the thyroid gland – proximal myopathy of upper limbs	59
6.18	Examination of the thyroid gland – proximal myopathy of lower limbs	59
6.19	Examination of the thyroid gland – knee jerk	60
7.1	Chest palpation – localisation of apex beat	65
7.2	Auscultation of the chest from in front	66
7.3	Auscultation of the chest from the back	66
9.1	Measures to relax the abdominal wall muscles	79
9.2	Examination of the abdomen	80
9.3	Inspection of the abdomen	83

9.4	Lateral inspection of the abdomen	85
9.5	Examination of the back	86
9.6	Superficial palpation of the abdomen	89
9.7	Superficial palpation of the left hypochondrium	90
9.8	Superficial palpation of the right hypochondrium	90
9.9	Superficial palpation of the right iliac fossa and the	90
	hypogastrium	
9.10	Superficial palpation of the peri-umbilical region	91
9.11	Superficial palpation of the umbilical region	91
9.12	Palpation of the liver	94 – 95
9.13	Percussion of the lower border of the liver (liver span)	97
9.14	Percussion of the upper border of the liver (liver span)	97
9.15	Palpation of the spleen	99 - 100
9.16	Examination of the spleen – Ballotement	101
9.17	Palpation of the spleen – Ballotement	101
9.18	Palpation of the right kidney	103
9.19	Percussion of the abdomen	110
9.20	Examination for ascites – shifting dullness	111
9.21	Examination for ascites – fluid thrill	112
12.1	Examination of hernia	140 - 141
12.2	Examination of hernia	142
12.3	Examination of hernia – checking for cough impulse	143
13.1	Examination of the nails	152
13.2	Examination of interdigital spaces	153
13.3	Palpation of the dorsalis pedis artery	154
13.4	Palpation of the posterior tibial artery	154
13.5	Palpation of the popliteal artery	155
13.6	Identifiaction of femoral artery for palpation	155
13.7	Palpation of the femoral artery	156
14.1	Examination of the venous system	163 – 164
14.2	Examination of the venous system – palpation over the course of the vein	165 – 166
14.3	Examination of varicose vein – percussion	167
14.4	Percussion with the middle finger at the other end of the vein	167
14.5	Examination of varicose veins (tourniquet test)	168 – 169
14.6	Tredelenburg test	170
14.7	Perthes' test	171 – 173

### **PREFACE**

The art of physical examination and history taking is an integral part of medicine. If you acquire the skills of picking up correct and important information and conduct optimal physical examination, your diagnosis in most of the cases will be correct. Many books on physical examinations were written in the authors' own ways of demonstrations and explanations. Many students complained of such varieties in physical examinations and show hesitations when performing their clinical examinations. I will try in this book to standardise these methods.

The book starts with history taking with essential and optimal questions to ask the patient and the reasons behind it. The subsequent chapters involves examination of the patient in a systematic and clinically-applied methods according to priorities. It is written in a way that students will find interest in reading this book and finally will be able to remember and apply the available information, as most of the information is clinically correlated to specific diseases. I hope this book will help all students and graduates alike. I would be happy to receive any comments or opinions to ensure the success of this book and ultimately, the medical students.

I would also like to take this opportunity to register my thanks to Dr Khin Maung Ohn @ Arif for helping in capturing the demonstrations photos. Above all, we must always remember to give our thanks to Allah (God).

Sabah Hassan Ketan Aldaragee
MBChB, DGS, FRCSI, FRCS (Glasg.), FACS
Professor of Surgery
Head of Surgical Based Department
Consultant Surgeon
Surgical Oncologist
School of Medicine
Universiti Malaysia Sabah
Kota Kinabalu, Sabah, Malaysia
2010

## INTRODUCTION

History taking and physical examination are valuable skills that are gained both through a cornerstone scientific knowledge and experience. Unfortunately, a majority of the medical students and new graduates lack competence in physical diagnosis. Most of the medical students faced a difficult choice in conducting physical examination due to the availability of different methods of examination of the patients. Due to lack of experience of these students and new graduates, they find themselves wandering among such different methods and approaches. For these reasons, a strong desire has risen and pushed me to publish a book that contains the methods of conducting examinations in a standardised way. My book will help the students and junior doctors in handling patients systematically and scientifically, starting from history taking to physical examination of the patient from the vertex to the tip of the big toe. The ways of demonstrating these examinations are clear, simple, attractive and comprehensive. Students will find that all the information is updated and correlated, in most instances, with the medical problems or diseases. I hope that the students and new graduates will reach the optimum level of learning and will truly appreciate the art of the science of history taking and physical examination.