

mechanisms *of* clinical signs

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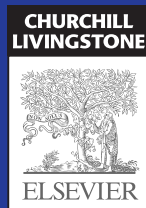
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Foreword

In the vast world of medical textbooks and literature, rarely does a book emerge that is truly unique in its educational content and approach. While endless books are available about clinical signs in the practice of medicine, and specifically in the diagnosis of human disease, few describe the pathophysiological mechanisms underpinning these clinical signs, i.e. why these clinical signs arise and what they mean. *Mechanisms of Clinical Signs* is a wonderful, comprehensive, easy-to-read reference book that describes clinical signs spanning all aspects of medicine and surgery. The book is clearly set out so that reference to specific systems and signs is very easy to follow. There is a uniform set of subheadings for each sign – Description, Condition/s associated with, Mechanism/s and Sign value – adding to the ease with which the book is read. The explanations

for the mechanisms underlying each sign are brief but accurate and informative, and provide sufficient information for the reader to understand the mechanism as well as directions for further reading if the reader chooses to do so.

This textbook is likely to be of value to medical trainees at all levels, from medical students entering their first clinical rounds on the wards to trainees about to embark on their basic physician training. I congratulate the authors, who had the insight as medical students to recognise a gap in our understanding of clinical signs. They have developed a wonderful resource that will not only educate our future doctors, but also facilitate the translation of this knowledge to the improved diagnosis and treatment of our patients.

Professor Chris Semsarian

Preface

Throughout our medical training, we are always learning how to look, listen and feel. These skills allow us to elicit critical signs that help narrow the differential diagnoses and identify the disease process causing our patient's illness. This allows us to narrow the field when initiating investigations into the cause – be it a virus or gene, trauma, immunological insult etc.

This book is not designed to show you how to elicit these signs. There are a number of texts, most notably Talley and O'Connor's *Clinical Examination* and the similarly named Macleod's, which can guide the novice through the many and varied system examinations. Nor will it explain the disease process in minute pathological detail as, again, there is a plethora of medical references available for that purpose.

The focus of this text is on the mechanism underlying the clinical sign – or why particular signs occur and what they mean. Most medical students and junior doctors can recall numerous occasions when they have been asked why clubbing occurs, what the mechanism of peripheral oedema is in hepatic failure, or similar questions that often lead to a stunned silence in front of their favourite (or least favourite) professor. This book will not only help you prepare for the Q and A session most consultants love to spring on students and junior doctors, it will also help you study for practical examinations such as OSCEs and long cases. In short, if you can explain the mechanism, you know not just the sign but its significance as well. This knowledge will serve you in good stead not only as a student or junior but in your own capacity as educator. The most common questions you will hear from patients and their families are 'What causes that?' and 'What does it mean?' The ability to provide answers simply and without jargon will go a long way towards creating an impression of you as an able practitioner.

Clearly, there is an almost infinite number of clinical signs in medicine and there is limited yield in knowing each and every one of them. Consequently, some of the more esoteric signs have not been included here unless we thought they would provide specific value to the reader.

Our focus is explaining classic signs that you may encounter every day and helping you to understand what they mean.

In a world of evidence-based medicine, it is important to understand the value of the clinical sign with regard to both its presence and absence. Does it even matter if a sign is present or not? In writing this textbook, we have been surprised by both the value and lack of value of a number of signs used every day in the diagnostic process. Small sections on evidence, whether it is strong or poor, have been included for as many signs as possible to help the reader.

The text has been designed to work as an easy reference guide. As such, chapters are organised by body system and signs are generally listed in alphabetical order. When one sign crosses multiple body systems, easy reference between chapters has been provided. We have also included a table of contents by condition or disease, which enables the reader to easily reference all the signs that relate to a particular condition, for example, Cushing's syndrome. Wherever possible, illustrations and simplified flow diagrams have been used to assist explanation. If the mechanism of a sign is not a proven fact, the most current theories have been summarised. Where no such theory exists, the mechanism has been referred to as unknown and perhaps will stimulate the reader to do their own research.

There is one unique feature in the 'Neurological signs' chapter. In writing this expansive chapter, it became apparent that, to understand the mechanisms of neurological signs, an understanding of the anatomical pathways involved is key. In order to simplify matters, we have added a 'topographical anatomy' section, which identifies the relevant neuroanatomy with regard to that sign.

We hope you find this textbook not only enhances your understanding of clinical signs and their causes, but also furthers your ability to communicate that knowledge to your patients, peers and seniors.

All the best,
Mark Dennis
William Talbot Bowen
Lucy Cho

CAVEAT:

While researching this book, the authors used reference texts as well as Medline, PubMed, Embase, SCIRUS and other databases – firstly to identify all relevant signs and secondly to find the most up-to-date information about them. Every

attempt has been made to provide the reader with the most recent information; however, with knowledge in medicine expanding at an exponential rate, it is possible that current thinking regarding causes may have been superseded by the time of publication.

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