

MGH重症醫學手冊

第五版

Critical Care Handbook of the Massachusetts General Hospital

Senior Editor: Luca M. Bigatello

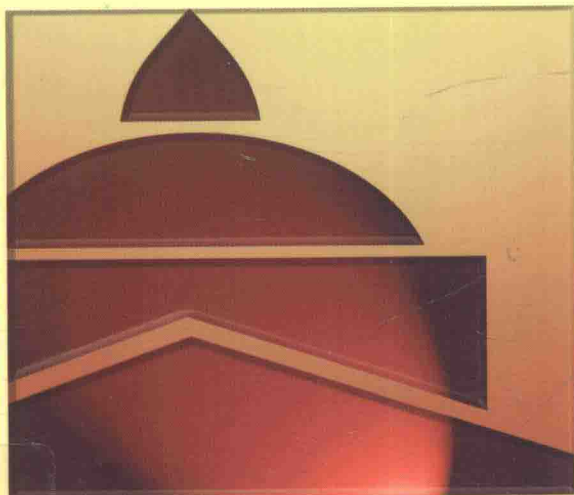
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校閱

編譯



MASSACHUSETTS
GENERAL HOSPITAL



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Health



九州圖書文物有限公司

MGH重症醫學手冊

第五版

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MGH 重症醫學手冊 / Luca M. Bigatello 等原著；陳應麟
編譯—第五版，——臺北市：九州圖書，2014年4月
面；公分；含索引
譯自：Critical Care Handbook of the Massachusetts
General Hospital, 5/e
ISBN：978-986-6929-31-1
1. 重症醫學
415.026 102026099

CoPublished by arrangement with Lippincott Williams & Wilkins/
Wolters Kluwer Health, Inc., USA.

本書係經由 Lippincott Williams & Wilkins 授權九州圖書文物有限公司
印行中文版，未經本公司書面授權同意，不得以任何方式作全部或局
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Chinese Edition ©2014 by Jeou Chou Book Co. Ltd., Taipei
Printed in Taiwan.

行政院新聞局出版事業登記證局版北市業字第 1223 號

MGH 重症醫學手冊 第五版

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郵撥：0166042-9
e-mail：jcpub@ms19.hinet.net
網址：www.jcbooks.com.tw
印刷所：瑞明彩色印刷有限公司
出版日期：2014年4月

ISBN：978-986-6929-31-1

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譯者序

「MGH重症醫學手冊」是一本實用的好書，對重症監護提供各方面所需的重要訊息。此書涵蓋了每一個題目，以一個簡潔、易於閱讀的方式，提供快速瀏覽，尤其特別適合輪換到ICU的住院醫師或實習醫師。我極力推薦這本書及它的姊妹作「MGH臨床麻醉手冊」，是麻醉醫師的寶典。

陳應麟
2014年4月

序 言

本書「MGH重症醫學手冊」是專為對成人ICU有興趣的學員和相關醫療人員提供實用且有效率的複習。儘管多年來著重於照護外科患者，但我們始終相信：學習、教學、臨床計畫是需朝多領域進行。因此，本書由麻醉、外科與內科重症專科醫師、護理師、呼吸治療師與藥劑師共同撰寫。多年來，患者入住外科、內科或神經ICU病房，其身體的運作方式是一樣的，藉由「生理學」將不同領域專業人員結合在一起。本書第一部分敘述「生理學」原理應用於重症監護，包括血流動力學、呼吸功能監測、酸鹼治療、機械通氣、抗菌藥物治療與營養支持。然而，由於重症醫學的進步，發展出設計良好的實驗證據，以指導醫護人員治療的選擇，因此本書強調建議所顯示的證據，ICU侵入性治療可能對患者造成傷害，因此患者治療成效的進步取決於「安全性」的執行。此書中有增加部分章節，包括院內併發症的預防、對ICU患者的安全運送及重症專科醫師提供加護病房以外的服務。

由於本書已經過多年的再版，作者與內容已有所改變，但仍保留部分較舊的資料。在此，我們感謝舊版的所有作者，其中許多人已有相當成就，並珍賞這些住院醫師與研究醫師於忙碌時所寫的章節。

最後，在離開MGH近20年後，我感謝無數同仁，他們使Ellison 4外科ICU(和她的各種前身)成為一個非凡工作之處。首先，我要感謝所有患者與其家屬，透過他們的親身痛苦而主訴病情及監督改善，使我們能以更好的治療方式醫治往後患者。再者，我誠摯感謝所有工作同仁－護理師、醫師、呼吸治療師、醫療助理、學員與多年來堅守工作崗位的人員，他們不是旁觀者，而是成就這個夢想的主角。

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第一部分



總 論

血流動力學監測

Erik Kistler and Luca Bigatello

I. 血流動力學監測的目標

其目標是維持充分的器官灌注。重症患者一旦發生重要器官灌注不足，會引發多重器官衰竭及死亡。本章將就臨床醫師如何根據基本的循環生理學知識解釋血流動力學數據進行討論。

A. 心血管功能與組織灌注(tissue perfusion)

器官灌注等於動靜脈壓力差除以血流阻力。

$$\text{血流} = \frac{(\text{P動脈壓} - \text{P靜脈壓})}{\text{血流阻力}}$$

因沒有直接測量各個器官血流的方法，所以假設靜脈壓及血流阻力保持恆定，用體循環動脈壓代替血流來反映器官灌注是否充分。

1. 平均動脈壓(Mean arterial pressure, MAP) MAP的數值最接近實際灌注壓。對於大多數患者而言，合理目標是維持MAP高於**65 mmHg**。有時可能需要維持更高水平[例如慢性高血壓、急性腎小管壞死(acute tubular necrosis, ATN)或中樞神經系統缺血時]。
2. 在正常情況下，自我調節機轉(autoregulation)可使器官血流維持在正常範圍。在動脈血壓變化時，自我調節機轉能夠藉由輸入血管的收縮或舒張維持恆定的血流。然而，在病理情況下(例如慢性高血壓、創傷及敗血症)，自我調節機轉發生嚴重障礙，此時器官血流直接依賴於灌注壓力(圖1-1)。

II. 以壓力為基礎的血流動力學監測

A. 低血壓的主要決定因素