The Healing Hand

Man and Wound in the Ancient World

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To my generous wife
who for ten years
never quite knew
whether I was there
or somewhere
around 400 B.C.

Preface

Ten years ago, my wife and I went to an afternoon party in a lovely garden near Boston. As the crowd gathered, our host came searching for me. "You know," he said, "since you are planning to write a history of the wound, you really ought to come and talk to Dr. Churchill." I knew Dr. Churchill, one of Boston's prominent surgeons in the Grand Old Tradition. So I told him about my project. He took one step back, raised his glass, and said, after an ominous pause: "Young man"—I was forty-three— "I have been trying that for thirty years. It can't be done."

He was probably right. A complete history of the wound would be difficult to write and impossible to read. It would have to cover all of surgery, much about wars and warfare, and the history of mankind altogether.

This book is far less ambitious. It is not even, strictly speaking, a medical book; I tried to write it plainly enough for anyone who would care to read it. In fact, I wrote it by accident. It was going to be the preface to a monograph on inflammation, which is more properly my field, and the preface took over.

The jump from inflammation to wounds, and from biology to history, was short. Most inflammations are the result of infection, and infection has always been a central issue in wound care. Ultimately, Lister's great crusade against bacteria was fought around wounds.

There are other reasons for being fascinated by the history of wounds. In ancient texts, diseases in general are difficult or impossible to recognize. What is, for instance, the *aaa* disease mentioned in the Egyptian papyri? Perhaps

schistosomiasis, but nobody really knows. Wounds, instead, are always wounds: they speak right out of the page. The problems of the patients, as of those who attend them, are obvious.

And then, long before the birth of anything that could be called experimental medicine, wounds also functioned as natural experiments, multiplied millions of times. They were treated with dressings, and in the long run the better dressings stood out. In this permanent battle between man and bacteria, it is thrilling to watch the birth of the first antiseptics, coupled with the history of wine, copper, honey, myrrh, and many other plant drugs and resins. In this sense, the wound was the first medical laboratory.

Besides infection, wounds have raised a series of problems, biological as well as human. Why do they bleed? Is there anything good about the bleeding? Does it have anything to do with pus, and how can one stop it? Can wounds be used as windows, to study live organs inside? What is the flesh made of? And for the historian, if a patient in any given place and time sought help from a physician, what were his chances of actually being helped? What did the physician do, why did he do it, and could it possibly work?

Because I am primarily interested in sick people, I have paid a great deal of attention to this last problem: trying to find out whether the patients were made better, or worse, by the treatment. In this respect, the medical writer can help the lay reader as well as the classical scholar, for the answers are usually buried in obscure drug names and cryptic medical explanations.

I have tried to find answers within the perspective of the time. This could not be done without a broad historical framework. The syringe, for instance, was invented in Alexandria, and its first medical use seems to have been on wounds. But to understand why this happened just in Alexandria required an excursion beyond the field of medicine.

My "patients," those whom you will meet in these pages, come from all parts of the ancient world, including China. In a recent treatise on the history of medicine, China was not even mentioned—silence was preferred to misinformation. But today, Joseph Needham's *Science and Civilisation in China* provides that guide to Chinese literature which had earlier been missing. So, with the courage of the amateur, I have dealt also with China.

This is my first experience with history, and I found it, from the point of view of the scientist, thoroughly exciting, yet often frustrating. Scientists like to run experiments and modify nature. Here all the experiments had been done, the records had not been well kept, and practically all the authors had died. To make up for the uncertainties, I chose some problems that could be tested in the laboratory and actually attempted some "experimental history," mainly with antibacterial drugs. These were most rewarding efforts.

I must also mention here a happy coincidence. As the last chapters were being completed, we happened to discover in our laboratory one of the basic mechanisms in healing a wound: the mechanism that draws one lip of the wound toward the other and closes the gap. I hope it is a good omen.

A history of the wound is necessarily born of untold human suffering. May this book be a drop in the sea of human understanding.

Acknowledgments

This book is the gift of hundreds of people. During the past eight years I have knocked at so many doors, and sent out so many calls for help, that I could not possibly acknowledge all my debts. The following list includes my major benefactors; others will be mentioned in the text and notes; to all, including my friends, colleagues, correspondents not mentioned here by name, I wish to express my perennial gratitude.

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Bibliographic assistants. Mrs. Ann M. Barry was the pioneer, courageous enough to get me under way when the book was merely a gleam in the eye. Mrs. Marie-Louise Bowditch was a jewel of insight and competence. Mrs. Martine Reed helped me wade through Chinese literature; Mrs. Pamela

Seldon, Miss Mary Perry, and Mr. Bert Collins carried the torch at various times. In Geneva, the intricacies of bibliographic work were handled with infinite care and precision by Miss Jeannine Merlo, whose finds figure in most of the following pages. Mrs. Meredith Frapier was my invaluable aide in Paris, always ready to tackle the most difficult subjects with the thoroughness and devotion of a true collaborator. After having shared so much research, anguish, and satisfaction, it seems absurd to acknowledge my debt in just a few words.

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Mr. Joshua B. Clark, Framingham, Massachusetts: Plates 3.8, 4.1, 4.2; Figures 1.2, 1.6, 4.17, 4.26, 4.35, 4.36, 6.1, 6.4, 9.15, 9.33, 9.44, and all the chapter symbols.

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Miss Judith D. Love of the Rhode Island School of Design: Figure 10.15.

Mr. Charles Ryser and his staff, Geneva, Switzerland: Figures 3.27, 3.28, 4.37, 6.5. The ability of Mr. Michel Czech in retouching photographs was always a pleasure to behold.

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trouble of combing through the chapter, helping me remove the major flaws (any left are strictly my own), and suggesting important additions (a forthcoming volume of Prof. Needham's *Science and Civilisation in China* will give the reader a much closer view of chinese medicine). In Geneva I was greatly helped by Prof. Jean-François Billeter.

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I also enjoyed a vast amount of negative help. There were times, especially in Geneva, when the members of my department would have liked to see me in the autopsy room or before a microscope—while I was before my typewriter or buried in some ancient text. Hence, this book is also the product of their patience, and to all of them goes my unending gratitude. I wish to thank them personally: Drs. Anne-Marie Schindler, Isabelle Joris, Jocelyne Grobéty, Pierre Vassalli, Guilio Gabbiani, Yusuf Kapanci, François Chatelanat, René Lagier, SvenWidgren, Jeremiah Cox, Chadli Bouzakoura, and Bernard Portmann.

The memory of Andrew Turnbull, a much lamented friend and one-time neighbor, lingers throughout these pages. Long ago, while he was finishing his

masterpiece, *Scott Fitzgerald,* Andrew came over to check some medical facts in my library. To my amazement, he was genuinely pained, not at the contents, but at the poor style of what he read. So real was his shock that he tried his best to prevent me from doing the same; he rewrote the introduction to one of my own scientific papers, and then took the trouble of explaining to me, patiently, some of the tricks of writing in English, like replacing nouns with verbs—not *reaching a conclusion* but just *concluding.* I must have thought of that lesson thousands of times since. Though English is not my language, it came closer to being so thanks to Andrew Turnbull.

My friends at Harvard University Press left their masterly touch in every part of this book: Arthur Rosenthal in the title and first chapter, William Bennett in every chapter, Virginia LaPlante in every paragraph, and Gretchen Wang in the design.

To thank my family in just a few words is another impossible task. The text is mine, but the time was largely theirs—hence the authorship should read, more precisely, "Guido and Fritzi Majno, with the assistance of Corinne, Lorenzo, and Luca."

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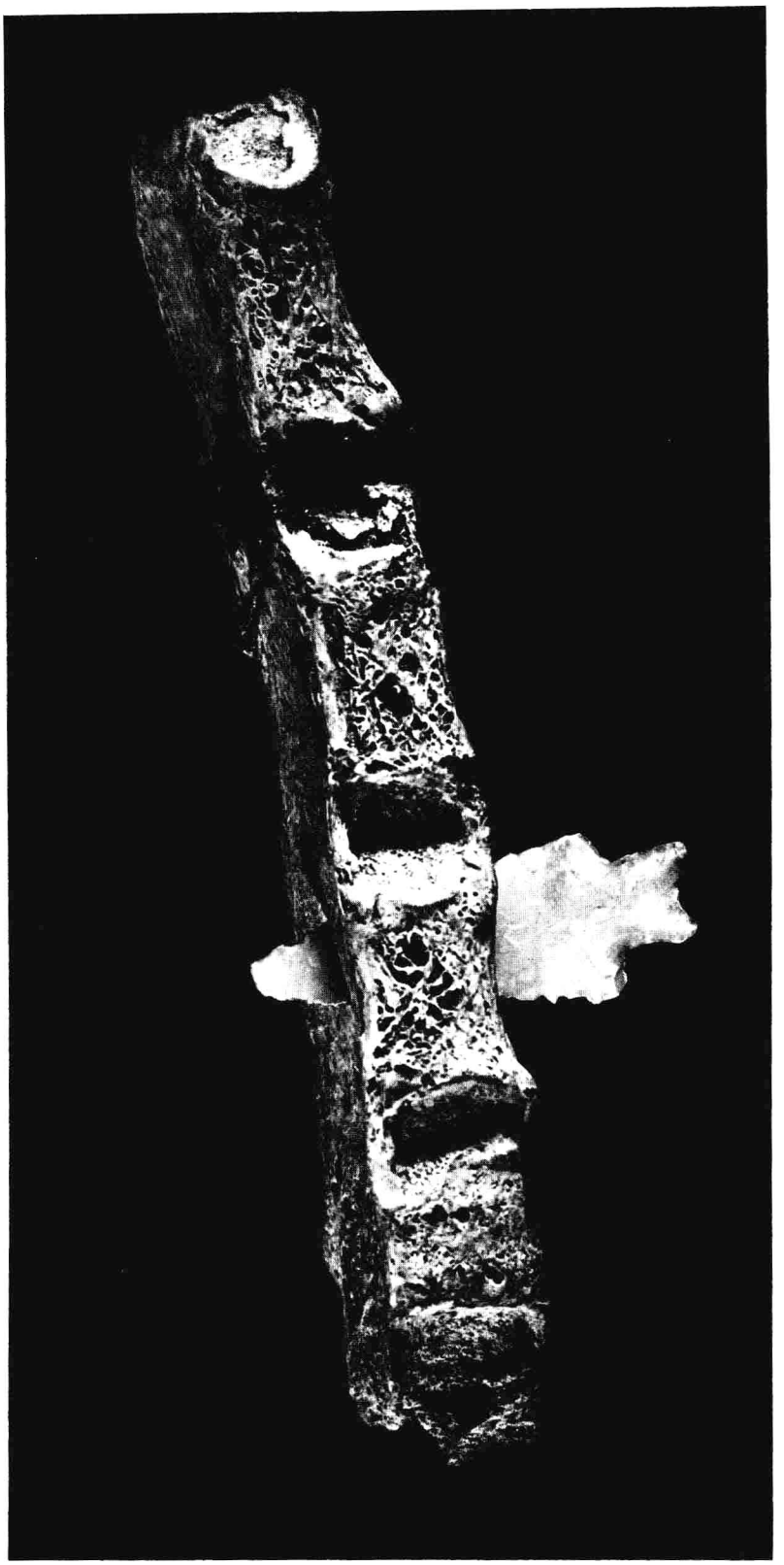

1.1 A flint arrowhead in a human sternum. It struck the bone from the front (right to left on the photograph) and penetrated into the chest deep enough to reach the heart: a deadly wound.

Contents

Illustrations