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TEXT-BOOK
OF
SURGERY

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УЧЕБНИК ХИРУРГИИ

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PREFACE

This textbook of surgery is intended for nurse-training schools. It deals with the role and duties of a scrub nurse. In order successfully to discharge her multifarious and very important duties the nurse must be familiar with the elements of surgery, surgical diseases and their treatment and first aid in accidents.

The textbook discusses in popular form asepsis and antisepsis, principles of organisation and administration of work in an operating room and surgical department of a hospital rather than clinical type, instruments and their care, anesthesia, preparation of patients for operations and postoperative care, administration of first aid in hemorrhages and injuries, and questions of clinical surgery.

All questions are dealt with only in so far as they will concern the scrub nurse in her daily practical work.

The material is presented in a certain succession and although some of the questions may not be of particular practical importance today, they are dealt with in order to facilitate learning.

The author endeavoured to present the material in an intelligible and popular manner.

AUTHOR

PART ONE

GENERAL SURGERY

INTRODUCTION

Surgery is a modified Greek term *cheirourgia*; it is formed of two words: cheir—hand, and ergon—work and therefore means a working by hand.

Surgery is the branch of medicine in which not only drugs, but also various mechanical therapeutic manipulations (incisions, punctures, suturing, reductions of dislocations, etc.) performed by the physician are used. These procedures are designated by the words "surgical operations" or merely by one word "operation".

For a very long time surgical operations were performed on wounds, bruises, ruptured tendons and other injuries only on superficial parts of the body. But severe complications frequently developed even after such operations and not infrequently caused the death of the operated patient. For example, during the Crimean War of 1855-56, 53 per cent of the wounded in the French army died after amputation of an arm, and only 36 of the 1,681 patients with an amputated leg survived, the remaining patients dying of various grave complications, mainly infections of the wounds.

The numerous grave complications and lethal results of the operations at that time were due to the fact that the surgeons were as yet incapable of preventing infections of the wounds.

Only during the second half of the 19th century did the general development of natural science make it possible to solve this difficult problem. The brilliant Russian surgeon N. I. Pirogov was the first to voice the assumption that wounds were infected by invasion of special causative agents which he named "miasmas". In 1863 the famous French scientist Pasteur published the results of his remarkable studies in the essence of the processes of putrefaction and fermentation. Pasteur proved that both these processes were evoked by minute living organisms—bacteria. On the basis of Pasteur's works the British surgeon Lister concluded that the purulence of wounds was also caused by bacteria which found their way into the wounds from the air. To protect the wounds from penetration of bacteria or to destroy these bacteria after their penetration into the wounds Lister began to

irrigate the wounds with a solution of carbolic acid and to treat the instruments and dressing material used during operations with the same solution.

The method elaborated by Lister was given the name of antiputrefactive or antiseptic. The use of the antiseptic method produced fine results. The number of complications which carried very many of the sick and wounded to their graves sharply diminished.

During the years that followed scientists found that to protect the wounds from infection it was enough to treat all objects which came in contact with the wounds by a physical agent (heat). This new method of disinfection by means of heat was given the name of asepsis.

The antiseptic and aseptic methods of treating wounds revolutionised surgery and almost completely eliminated the danger of infecting wounds. They made it possible to operate not only on the superficial parts of the body, but also on internal organs. Under the protection of asepsis and antiseptis most diverse and complex operations are now successfully performed on such vitally important organs as the lungs and heart.