

SURGICAL PATHOLOGY

BY

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410 ILLUSTRATIONS

LONDON

HENRY KIMPTON

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TO
MY WIFE
MARGARET
AND DAUGHTERS
LINDA AND PAULA
FOR CHEERFULLY PERMITTING
MANY HOURS OF NEGLECT

PREFACE

With the development of the many specialties in the field of medicine and with the advent of the certifying boards, the surgical pathologist is constantly approached by the prospective examinee for recommendation of a source from which to study pathology in his respective field. This book is designed to serve as this source—to cover adequately the major surgical specialties, namely, ear, nose and throat, general surgery, urology and gynecology. While none of the subdivisions is exhaustively treated, each is considered with enough detail to give the specialist a basic understanding of his particular subject.

The book is also designed to aid the surgical pathologist and the surgeon who often wish only to refresh their memories as to the salient points rather than to wade through a mass of sometimes irrelevant detail. For all concerned two ideas have been kept in mind: (1) to treat the subject from a regional viewpoint; and (2) to summarize, as far as possible, the current ideas from the current literature.

With regards to the text itself, the material must of necessity be incomplete. For example, in the chapter on the skin it would be impossible to cover all the lesions without writing a separate book. For this reason only those cutaneous conditions which are more commonly encountered in a general hospital such as ours have been described. The brain and spinal cord have been omitted, for this is regarded as an entirely different field—a specialty in itself. A brief account of the embryology, anatomy and histology of each system has been included because these subjects are deemed extremely important for a thorough understanding of pathology, and if they are not before the reader in concise form, he is too often reluctant to look them up. To accomplish this the following textbooks were freely consulted:

Arey, Leslie Brainerd: *Developmental Anatomy. A Textbook and Manual of Embryology.* Fourth Edition. W. B. Saunders Co., Philadelphia, 1943.

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Finally, enough clinical material is included to bridge the gap between what are often called the preclinical and the clinical sciences in an attempt to make pathology a living subject.

My thanks are due many people. Both the attending and resident staffs have been most helpful and coöperative in securing material suitable for photographing. I particularly wish to thank Dr. C. J. Bucher for valuable aid, Dr. P. C. Swenson for the roentgenograms, Mr. Allen F. Hancock for the photography, Mr. J. J. Wilson, our librarian for his assistance, and Dorothy Ewald Bauer for the secretarial work.

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PHILADELPHIA, PA.

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Surgical Pathology

Chapter I

SKIN AND SUBCUTANEOUS TISSUE

EMBRYOLOGY AND HISTOLOGY

THE **skin** is composed of an outer portion—the epidermis, which arises from the ectoderm, and an inner portion—the corium, which arises from the immediately subjacent mesoderm. In the first few weeks of embryonic life, the *epidermis* consists of a single sheet of

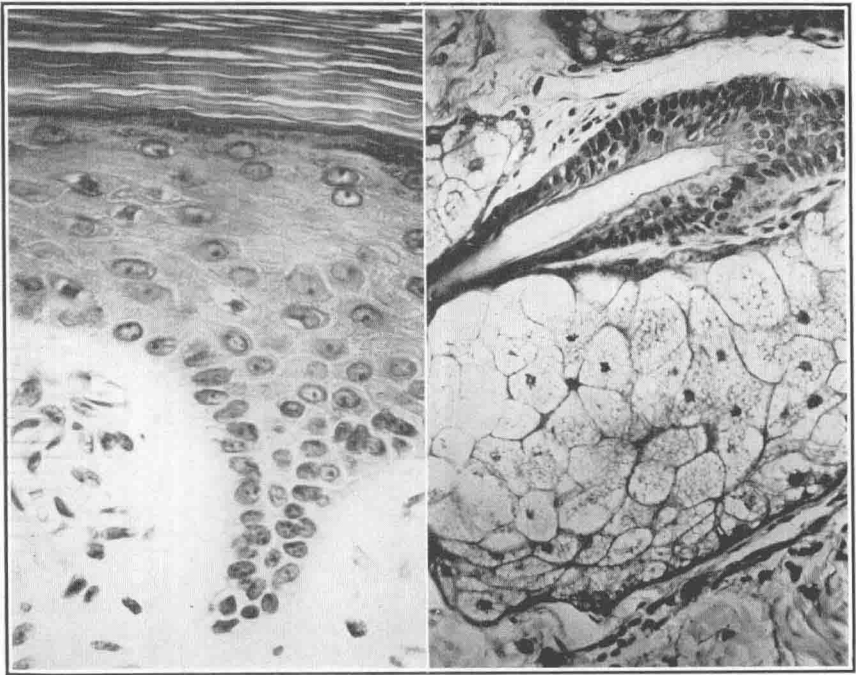


FIG. 1.

FIG. 2.

FIG. 1.—Normal skin showing from above down stratum corneum, stratum granulosum, stratum germinativum composed of polyhedral prickle cells with distinct intercellular bridges and a basal cell layer, a rete cone in the center and papillae on either side of the latter. x 400.

FIG. 2.—Normal hair, hair follicle and sebaceous gland. The characteristic cell of the latter is large, polygonal with distinct reticulated cytoplasm and small round nucleus. x 200.

cuboidal cells. Gradually, differentiation occurs so that at *birth* four layers are recognizable (Fig. 1), (1) an external stratum corneum

composed of many layers of flat, keratinized, dead cells, (2) stratum lucidum composed of several layers of flat, closely packed, clear cells without nuclei, (3) a narrow stratum granulosum consisting of three to five layers of flat cells in the cytoplasm of which are found small granules and (4) stratum germinativum composed of several layers of large, polyhedral, prickle cells covering a single layer of cuboidal or cylindrical basal cells. All these layers, however, are identifiable only in the skin of the palms and soles whereas elsewhere the corium, prickle cells and basal cells alone are discernable. In all areas the inner surface of the epidermis is thrown into pyramidal projections, called rete cones which point into the dermis. Pigment granules are added to the basal layer shortly after birth.

The *corium* is composed of collagen and elastic fibers and is dividable into a compact superficial portion and a loose, fatty, deep portion. It contains numerous blood and lymph vessels, nerves and nerve endings, scattered pigmented cells and epidermal appendages. The latter consist of nails, hairs, sebaceous glands and sweat glands.

The *nails* first appear at ten weeks as a thickening of the epidermis and then grow proximally to the level of the first phalanx. They regenerate from the proximal portion—the nail root—and in the adult form consist of closely welded, cornified, epithelial cells. The *hairs* develop at three months as downgrowths of the germinal cells

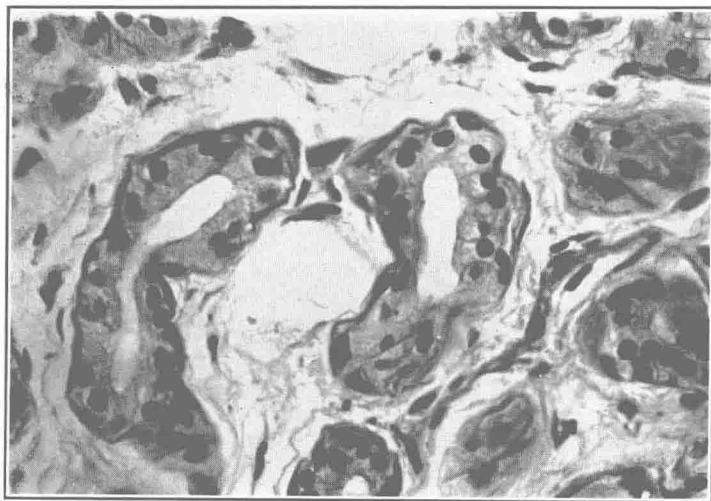


FIG. 3.—Normal sweat gland showing from without in a basement membrane, a single layer of flat myoepithelial cells and a single row of cuboidal cells. x 400.

of the epidermis (Fig. 2). The initial buds consist of outer columnar cells continuous with the basal cells of the epidermis, an inner mass of polyhedral cells, and a bulbous base that covers a nugget of connective tissue which forms the papilla. The basal cells covering the latter actually give rise to the hair substance. Protruding from the under surface of the hair are two swellings—an upper which forms the sebaceous gland and a lower which contributes to the