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Atlas of Geriatric Dermatology

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ISBN 978-1-4471-4578-3 ISBN 978-1-4471-4579-0 (eBook)
DOI 10.1007/978-1-4471-4579-0
Springer London Heidelberg New York Dordrecht

Library of Congress Control Number: 2013943286

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Preface

This atlas seeks to provide informative reading for dermatologists, geriatricians, internal medicine and family practice physicians, nurse practitioners, physician assistants, nurses, and medical assistants who provide care for the elderly. The work also offers ample material for medical, nursing, nurse practitioner, and physician assistant students. Dermatology residents and Fellows training in geriatric medicine will find the book to be a very helpful foundation in geriatric dermatology.

Glossary

Basic Dermatologic Terminology: Clinical

In examining patients who have skin problems, it is helpful to note the morphology of individual lesions, their pattern in relation to each other, and their distribution on the body. Since the earliest days of medicine physicians have been observing skin diseases and classifying them by these three criteria. Skin diseases are generally dynamic processes that evolve over their course. It is often helpful to identify **primary lesions**, which are the earliest abnormalities, and **secondary lesions**, to which they may evolve. Understanding this evolutionary process makes understanding the pathophysiology of the disease possible.

Primary lesions include a macule, papule, nodule, tumor, wheal, vesicle, and sometimes a pustule. A **macule** is a lesion in which the only abnormality is a change in color. Areas of color change larger than about 1 cm in diameter are referred to as **patches**. A macule may be **hypopigmented**, having a decrease in pigment, or may be **depigmented**, lacking pigment entirely (e.g., vitiligo). It may have an increase in the normal melanin pigment and be **hyperpigmented**. It may have an abnormal color, such as red or yellow. **Erythema** is the term used to describe reddening of the skin; it is generally associated with an increase in blood flow to an area. A yellowish discoloration in the skin may come from certain bile pigments, lipids, severe solar damage, and from yellow pigments in food and dye in some medications.

A raised or indurated lesion may be called a papule, nodule, or tumor. **Papules** are small, generally less than 1 cm in diameter. **Nodules** are somewhat larger. A very large nodule would be called a **tumor**, but this term also refers to any abnormal growth in any organ system. This term must therefore be used with special care, because most patients think that the term "tumor" is synonymous with cancer, which is not true.

A **wheal** (also called urticaria) is the medical term for a hive. It results from the leakage of fluid from blood vessels, which is then held diffusely in the tissue. This causes temporary raising of the tissue; this resolves within a matter of hours as the fluid finds its way back into the circulation through the lymphatics.

Small blisters are called **vesicles**, and larger ones are called **bullae**. These differ from wheals in that they are collections of free fluid within cavities rather than being held diffusely in the tissue. Therefore, they are not transient, as are wheals.

A **pustule** is a cavity filled with pus, which is made up of a mixture of fluid, cellular debris, and microorganisms. Sometimes pustules can be secondary lesions resulting from infection or from irritation of a papule or a vesicle.

Even if no primary lesions are present at examination, it is often possible to make a deduction on the basis of the pathophysiology of primary and secondary lesions.

Weeping and oozing lesions are seen secondary to the rupture of vesicles and bullae. Sometimes, the primary vesicles may have been too small to be seen except microscopically, as in some types of eczematous dermatitis.

Crusts represent dried fluid. Black crusts are usually from blood. Yellow crusts represent dried serum, as from bullous lesions. Brownish or honey-colored crusts, however, are secondarily infected with bacteria, as in impetigo.

A **plaque** is an elevated, plateau-like lesion, which develops from the coalescence of smaller lesions, such as wheals or papules.

A **scale** (also called a squame) is a dried-out bit of excess horny material. It may be secondary to inflammatory erythema, or it may be from excessive production. It is often helpful to describe scales further as thick, fine, or forming a collarette around the lesion.

These terms can be hybridized to describe lesions. Papulosquamous diseases are those that are raised and have scaling on their surfaces. A papulovesicular eruption has both papules and vesicles. Maculopapular eruptions have some areas of only erythema and other areas of erythematous papules.

Various terms are used to describe the shape of lesions. **Linear** refers to lesions in a line. **Annular** means ring-shaped. **Serpiginous** refers to those that wind in a snake-like pattern. **Geographic** refers to a map-like configuration. **Target** or **iris** lesions have a central point with a ring around it, and are usually seen in a condition called erythema multiforme. **Guttate** eruptions are those in which the lesions are small and in the shape of drops.

Other terms are used to identify other surface changes. **Verrucous** means wart-like. **Vegetation** refers to a large, moist, cauliflower-like growth. **Keratosis** is a term describing a circumscribed increase of the horny layer made up of keratin, the major protein in the epidermis. **Excoriations** are scratch marks. Chronic scratching or rubbing of the skin may cause thickening and the development of closely set, flat papules. This is called **lichenification**, which appears as exaggerated skin markings.

Maceration refers to continuous wetting of the skin, which produces thickening and whitening of the skin. It is more likely to occur on **intertriginous** skin. This refers to an area where adjacent skin surfaces rub against each other, such as the axilla and groin, trapping moisture. Excessively dry skin is said to be **xerotic** or **asteatotic**. **Eczematization** refers to a combination of weeping, oozing, vesiculation, erythema, crusting, and lichenification.

Various terms are used to describe abnormalities of structures within the skin. **Alopecia** refers to hair loss. **Hirsutism** or **hypertrichosis** are terms for increased hair. Inflammation of hair follicles is called **folliculitis**. When it is superficial, it appears as small pustules at the base of hairs. Large and deep infections of hair follicles are called **furuncles**. The merging of several adjacent furuncles is called a **carbuncle**. **Comedones** (singular, comedo) include blackheads and whiteheads; these are white, gray, or black plugs in the pilosebaceous openings, consisting of dried sebum, cellular debris, and bacteria. **Cysts** are noninflammatory collections of fluid or semisolid substances surrounded by a well-defined wall.

Telangiectases (singular, telangiectasia) are permanently dilated, small, superficial blood vessels. They usually blanch if they are pressed down, because the blood is within vessels. **Petechiae** are small hemorrhages from superficial blood vessels, which therefore do not blanch. Larger areas of bleeding into the skin are called purpura or ecchymoses.

Examination of the skin and the use of these terms allow most skin diseases to be put into the following categories:

Tumors
Pigmentation abnormalities
Papulosquamous diseases
Vesiculobullous diseases
Papular eruptions
Eczematous dermatitis
Hypersensitivity reactions
Cutaneous infections and infestations
Diseases of the skin appendages (hair, nails, glands, blood vessels)

Basic Dermatologic Terminology: Histologic

Hyperkeratosis is increased thickness of the stratum corneum.

Parakeratosis is the retention of nuclei in the stratum corneum. The stratum granulosum is usually thinned or absent (hypogranulosis) in the presence of parakeratosis.

Hypergranulosis is the increased thickness of the stratum granulosum. Hyperkeratosis is often associated with hypergranulosis.

Acanthosis is the increased thickness of the stratum spinosum.

Acantholysis is the loss of cohesion between epidermal squamous cells, with separation of squamous cells from each other (i.e., cells pull apart).

Intracellular edema is hydropic swelling with cytoplasmic pallor of the squamous cells of the stratum spinosum. When severe, this results in reticular degeneration (see below). This is often accompanied by intercellular edema.

Intercellular edema (**spongiosis**) is edema that develops between squamous cells of the stratum spinosum. The accumulation of colorless edematous fluid between the cells causes separation, with widening of the intercellular spaces and stretching of desmosomes. This imparts a spongy appearance to the epidermis. When severe, spongiotic vesicles form. This is often accompanied by intracellular edema.

Exocytosis is the migration of inflammatory cells from blood vessels in the superficial dermis into the epidermis.

Reticular degeneration is a consequence of severe intracellular edema that causes rupture of epidermal squamous cells, with the formation of multilocular vesicles from resisting cell membranes.

Spongiotic vesicle is the consequence of severe intercellular edema (spongiosis) that causes stretching and loss of the desmosomal attachments between squamous cells, with the formation of blisters in the epidermis.

Acknowledgements

I have great respect and gratitude for my patients, students, and family who have helped me to succeed with the vast challenge and diversity of Geriatric Dermatology. In particular, thanks to Joseph Salhab, OMS4, and my assistant Ibsen Morales for their help in the preparation of this book. Special thanks to Dr. Edward Young, Jr, MD for serving as my co-author. And many blessings to the memory and works of Victor Newcomer, MD, Albert M. Kligman, MD, and the other pioneers of Geriatric Dermatology that helped to set us on the right path. Thanks for caring for our elderly.

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