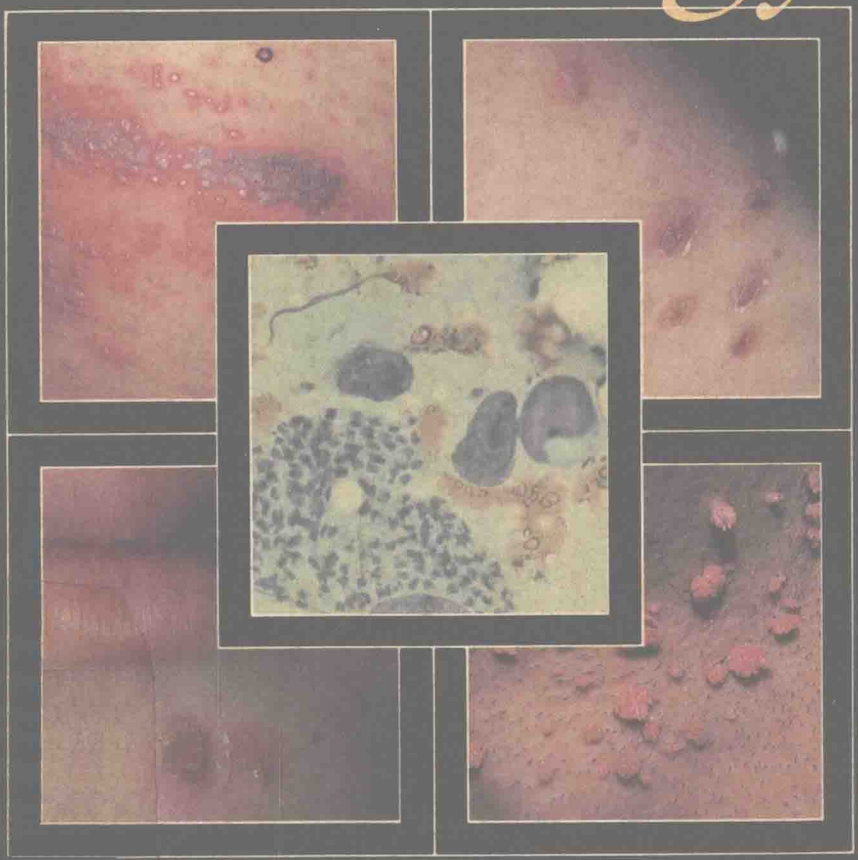
Clinical Atlas of Dermatology



C. Ferrándiz

Clinical Atlas of Dermatology

C. FERRANDIZ
Professor of Dermatology
Princeps D'Espanya Hospital
L'Hospitalet Del Llobregat
Barcelona, Spain

Translated by
Saturnino and Sandra Arjona

YEAR BOOK MEDICAL PUBLISHERS, INC.
Chicago ■ London

This book is an authorized translation from the Spanish edition published and copyrighted 1985 by Ediciones Doyma, S.A. Travesera de Gracia, 17-21, 08021 Barcelona. Title of the Spanish edition: ESQUEMAS CLINICO-VISUALES EN DERMATOLOGIA

Series Editor: Professor C. Rey-Joly

Library of Congress Cataloging-in-Publication Data

Ferrándiz, C.
Clinical atlas of dermatology.

Translation of: Esquemas clinico-visuales en dermatologia.
Includes bibliographies and index.
1.Dermatology—Atlases. I. Title. [DNLM: 1. Dermatology—atlases. WR 17 F372e]
RL81.F4713 1986 616.5 86-11184
ISBN 0-8151-3243-3

1 2 3 4 5 6 7 8 9 0 K Cr 90, 89, 88, 87

Sponsoring Editor: Linda A. Miller
Manager, Copyediting Services: Frances M. Perveiler
Production Project Manager: Carol A. Reynolds

PREFACE

The practice of medicine does not always allow physicians sufficient time to take full advantage of the abundant information available to them in the literature. The intention of this series of clinical atlases is therefore to provide the medical profession with the best information available on a particular subject in such a way that it is quickly and easily assimilated. The books in this series are not exhaustive treatises on specific medical disciplines but rather provide a scientific approach for arriving at the diagnosis of the diseases and syndromes most frequently encountered by the different medical specialties.

It is hoped that the pairing of brief but essential text with four-color illustrations of exceptional quality will allow the student in his last year, the resident-in-training, the general practitioner, or even the specialist to identify in a few minutes a salient characteristic of a specific process. It may be a cutaneous lesion, the radiologic localization of a thoracic disorder, the movements of a febrile curve, or the aspect of a specific secretion that prompts one to remember the occasionally forgotten disease or syndrome. At other times a definition, the frequency, or the most significant clinical characteristics will be the clue that leads to the correct diagnosis.

Diseases of the skin are the most frequent cause of human morbidity. Almost 20% of the patients that visit a general practitioner do so because of skin problems. Therefore recognition of these conditions is important not only to the dermatologist but also to other physicians, who frequently come in contact with dermatologic problems within their own particular field of expertise, and especially to the internist, who often finds a detailed inspection of the skin alone to be very useful in the diagnosis of systemic diseases. Therefore this particular volume in the clinical atlas series will serve to assist all professionals to "read" the skin.

Great effort has been expended to initiate this new series, whose sole objective is to serve the medical profession. Ultimately, however, its usefulness rests with the reader to decide.

Prof. C. Rey-Joly, Series Editor
Professor of General Pathology and Clinical Propedeutics
School of Medicine
Autonomous University of Barcelona, Spain

TABLE OF CONTENTS

Clinical Atlas of Dermatology

I. GENERAL PRINCIPLES

1. Examination of the Skin

Simple visual inspection of the skin, along with palpation, is still the most important factor in dermatologic diagnosis. On examination we try to define the number, size, color, form, site, distribution, and configuration of the lesions, as well as the type of basic lesion that constitutes the main factor in "reading the skin," using palpation to determine the consistency, texture, degree of moisture, depth, and adherence or nonadherence of the lesions to deeper layers.

The morphology of the different types of skin lesions is the key that permits the dermatologist to "read" the diagnosis.

Types of Skin Lesions

Lesions can be primary, appearing in the skin that until then is normal, or secondary, caused by transformation of the primary lesions or by accidental external causes. For a classification of skin lesions, primary and secondary, see Table I.

Papule. A papule is a solid lesion, circumscribed and elevated, generally less than 1 cm in diameter (Fig. 1). A papule can develop from localized hyperplasia of the epidermal cells, dermal cellular infiltration, or deposits of metabolic substances in the dermis.

Nodule. A nodule is a solid lesion, more or less voluminous, round or elliptic, caused by a benign or malignant proliferation of epithelial cells, or it can be the result of inflammatory or neoplastic processes that settle in the dermis and/or hypodermis (Fig. 2). In this last case, to know its characteristics one should rely more on palpation than on inspection. When it softens, ulcerates, and heals leaving an atrophic scar, it is called "gumma."

Table I. Classification of skin lesions

	Primary	*Secondary*
Above the skin	Papule Nodule Vesicle Bulla Pustule Wheal	 Scale* Crust* Scar (hypertrophic)
At skin level	Macule	Scar
Below the skin		Scar (atrophic) Erosion Excoriation Fissure Ulcer Atrophy

*Occasionally scales and atrophies are primary lesions.

Fig. 1. Papules formed by the combination of dermal cellular infiltration and epidermal hyperplasia, characteristic of lichen planus.

Fig. 2. Nodule, which is an epidermoid cyst, on brow.

Fig. 3. Vesicles in a patient with dyshidrotic eczema.

Vesicle and Bulla. Both vesicles and bullae are fluid-filled, circumscribed elevations of the skin. They are called vesicle or bulla depending on whether their size is smaller or larger than 0.5 cm (Figs. 3 and 4). They can be subcorneal, intraepidermal, subepidermal, or intradermal, depending on the level where they form. Spongiotic vesicles are a special kind of vesicle, caused by intercellular edema and are characteristic of eczema. The different components of a vesicle or bulla could cause the following basic secondary lesions: the blister roof turns into scale, the blister content forms a crust, and the blister base becomes an erosion.

Pustule. A pustule is a circumscribed elevation of the skin that contains pus (Fig. 5). Pustules can be primary, in which case a circumscribed accumulation of leukocytes and pathogens is produced in a tissue (or, in sterile pustules, only leukocytes), or secondary, when they are formed by the emigration of leukocytes to a previous vesicle or bulla. Those located around hair follicles are called follicular pustules.

Wheal. A wheal is a circumscribed elevation of the skin that may be clearly or unclearly defined, provoked by a superficial edema, acute and evanescent, at the level of the dermis (Fig. 6). When the edema is deeper it is called an angioneurotic edema.

Macule. A macule is a circumscribed area of discoloration of the skin of various sizes, shapes, and colors. There are several types.

Erythematous Macules. Erythematous macules are conditioned by a circumscribed vasodilatation, are generally temporary, and disappear upon diascopic pressure. If they are congenital, persistent, and due to an increase in the number and size of the blood vessels, they are called flat angiomas.

Purpuric Macules. Purpuric macules are caused by an extravasation of blood in the tissues; unlike erythematous macules they do not disappear upon diascopic pressure. Depending on their size, disposition, and level of profundity, they are called petechiae, purpura, vibices, ecchymoses, or suggillations.

Pigmented Macules. Pigmented macules are produced by the deposit of a pigment or stain. The pigment can be of internal origin, such as melanin and hemosiderin, or of external origin, as in tattoos.

Achromic Macules. Achromic macules are conditioned by an absence of melanin (Fig. 7) or a vascularization defect.

Scales. Scales can have many different aspects: small, fine, and flour-like (pityriasiform); silvery lamellated (psoriasiform); or large laminate (exfoliative) (Fig. 8). They are due to hyperkeratosis by retention, proliferating hyperkeratosis, or desiccation of a bulla.

Crust. Crust is a solid accumulation resulting from dried secretions of organic exudates, serum, blood, and pus on the surface of the skin.

Erosion. Erosion is a superficial loss of substance, limited to the superior part of the dermis. It can be secondary to dislodgment of the tip of a bulla or created by slight traumas.

Fig. 4. Bullae in a female patient with *herpes gestationis*. In this disease the bullae are subepidermal.

Fig. 5. A pustule, which is the primary basic lesion of folliculitis among other diseases.

Fig. 6. The wheal, the basic lesion in urticaria, characterized by a superficial, localized, acute, and evanescent edema.

Excoriation. Excoriation is a loss of the superficial part of the dermis due to scratching.

Fissure. A fissure is a linear crack frequently occurring in the mucosa or semimucosa and in the palms and soles.

Ulcer. An ulcer is a loss of substance caused by destruction of elements of the epidermis, dermis, and on occasion, hypodermis (Fig. 9). In the description of every ulcer one must consider its form, extension, aspect of the borders, base, and the state of the regional lymphatics because there are morphologies that by themselves suggest some diseases. Ulcers always heal with scarring.

Scar. Every scar is the result of a defective restoration of lost substance. If the newly formed connective tissue is insufficient, an atrophic scar (depression) will form, and if excessive, a hypertrophic scar (prominence).

Atrophies. Atrophies can be epidermal, due to a diminution of epidermal cells, in which case a thin and transparent epidermis is the result, or they can be dermal, consecutive to a diminution of the connective tissue of the dermis, which will manifest as a depression of the skin.

Once the type of basic lesion is determined, the patient has to be examined again to observe the number, size, distribution (scattered, grouped, confluent), extension (regional, unilateral, segmented, generalized), specific localization, and form of the lesions, and then palpated to determine their wetness, texture, and consistency.

Fig. 7. Achromic macules in a male patient with vitiligo.

Fig. 8. Primary scales in a male patient with ichthyosis. Scales can be primary or secondary lesions.

Fig. 9. Ulcer in the leg of a female patient with venous insufficiency and varicose veins.

2. Additional Diagnostic Tests

For an examination of skin lesions, observation with the naked eye and direct palpation may be sufficient to establish a diagnosis. In many cases, two easily performed maneuvers may be necessary to provide additional data.

Brocq's Methodic Scraping. This procedure is performed by lightly striking the tips of scaly lesions, which may help determine the nature of certain lesions.

Diascopy. Diascopy consists of compression of the lesion by a transparent glass slide so that the congestion that disguises the lesions is eliminated and coloration of the deep infiltrates can be be observed.

Sometimes other procedures must be employed. Most common are the following.

Illumination of Lesions by Wood's Light. This is long-wave ultraviolet light from which, via a nickel oxide filter, all of the visible rays have been extracted. It is particularly useful for diagnosis and control of tinea capitis, diagnosis and control of bacterial infections such as erythrasma and those due to Pseudomonas, and the detection of porphyria and confirmation of pigment alterations.

Patch Tests. Patch tests are important in the diagnosis of contact eczema (Fig. 1).

Biopsy. In dermatology, biopsy is absolutely necessary for the diagnosis of many inflammatory diseases and obligatory for the diagnosis of cutaneous tumors. It is easy to perform and does not involve any risk. A biopsy can be performed with a scalpel or a punch.

Microscopy with Fluorescence. This procedure is important in the diagnosis of autoimmune bullous diseases and certain connectivopathies (Fig. 2).

Cytodiagnosis. This technique is particularly useful in the diagnosis of bullous diseases and vesicular eruptions due to virus and, on occasion, tumors (Fig. 3).

Photobiologic Exploration. This technique is sophisticated and is used more for scientific than for clinical purposes.

Bacteriologic Study. This procedure is used for the detection of viruses, bacteria, fungi, and parasites.

On many occasions dermatologic examination must be accompanied by a general physical examination, the character and extent of which will be conditioned by careful evaluation of the history, cutaneous findings, and other circumstances.

Fig. 1. Patch tests positive to different components of rubber in a female patient with a history of contact eczema due to use of rubber gloves.

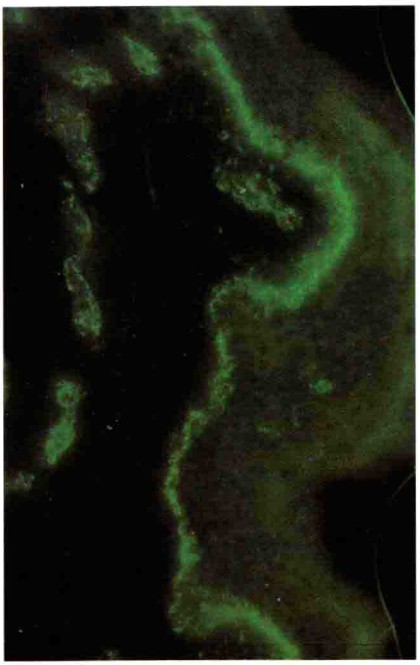


Fig. 2. Direct immunofluorescence of a biopsy of healthy skin from a patient with systemic lupus erythematosus. A linear deposit of IgG and C3 can be seen in the basal membrane.

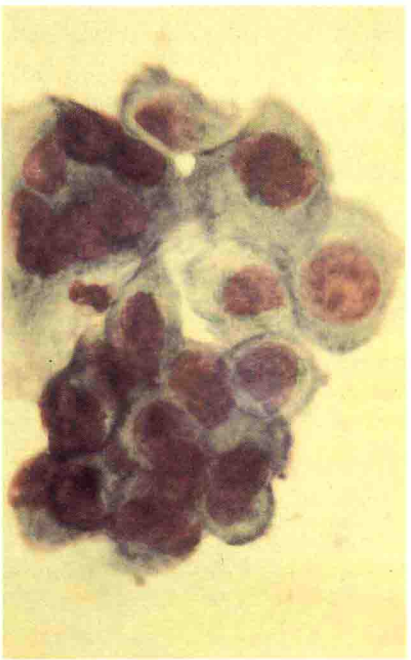


Fig. 3. Cytology of the bottom of a bulla in a male patient with pemphigus vulgaris. The presence of Tzanck's cells is diagnostic.

3. Impetigo

Definition

Impetigo is a superficial infection of the skin, contagious and autoinoculable, caused by Streptococcus or Staphylococcus or both.

Etiology

Some forms are caused by *Staphylococcus aureus*, others by group A Streptococcus, and in mixed forms both microorganisms have been isolated.

Clinical Forms

There are two different forms as far as epidemiology and principal clinical manifestations are concerned, but among these two forms there is no constant correlation between the character of the lesions and the bacteriologic findings.

Tilbury Fox's Impetigo. This form is principally due to a streptococcal or mixed infection. It affects mainly children between 5 and 7 years of age. Its greatest incidence occurs during the summer and the beginning of spring. Clinically, it is characterized by the appearance of small, very thin-walled vesicles that rest over an erythematous base. The vesicles rupture rapidly, leaving small eroded areas that are quickly covered by brownish yellow crusts with a honey-like aspect, very characteristic of this disease (Fig. 1). The lesions tend to extend peripherally in an irregular form, such that they blend and form shapes with adjoining borders (Fig. 2). After the crusts break loose, residual erythemas persist that will finally disappear without leaving a scar. Even though the lesions can appear in any part of the skin except the palms and soles, their more frequent locations are on the face, mainly around the nose and mouth, and the extremities. In severe cases, which are rare, the eruption can be accompanied by fever, regional adenitis, and other general symptoms.

Bullous Impetigo. Provoked almost always by staphylococcus, this is the only form of impetigo that can appear in the newborn (pemphigus neonatorum), and, even though it can affect individuals of any age, it is the characteristic form in older children and adults. It has its greatest incidence during the summer and can cause epidemics. Clinically, the bullae are much larger than in the previous form; they can reach 1 or 2 cm in diameter and remain intact 2 or 3 days before rupturing (Fig. 3), after which they form thin brownish crusts. The content of the bullae is clear at the beginning but later becomes cloudy. Frequently circinate lesions can be observed due to the peripheral extension of the lesions with central healing. The lesions can affect any zone of the skin, including the palms and soles.

Complications

The only serious complications of streptococcal impetigo are acute glomerulonephritis and, more rarely, epidermal necrolysis of staphylococcal origin.

Treatment

As a general rule, topical treatment is sufficient. Removal of the crusts from the lesions with astringent solutions is essential, followed by the application of topical antibiotics of the tetracycline type or fusidic acid. If the lesions are extensive, in particular when they invade the scalp and ocular region or are accompanied by fever or adenitis, it is necessary to administer antibiotics intramuscularly.

Fig. 1. Erosions covered by honey-like crusts, characteristic of Tilbury Fox's impetigo.

Fig. 2. Impetigo with multiple lesions by autoinoculation. The lesions tend to extend peripherally, then converge, forming shapes with polycyclic borders.

Fig. 3. Bullous impetigo, which is of staphylococcal origin. The bullae persist longer than in streptococcal impetigo.