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Preface

Approximately 30 years after the introduction of dermatoscopy, the reality justified the prediction that dermatoscopy would radically modify dermatology. In our opinion, this happened because dermatoscopy fulfills two prerequisites that are mandatory for any new technology to become really revolutionary: high efficacy and easy application.

It was never difficult to understand that by revealing structures invisible to the naked eye, dermatoscopy can enhance the morphological interpretation of skin tumors or eruptions. This seems reasonable for any kind of imaging device or technology that has the potential to expand the human visual limit. However, this was not enough to radically change the reality of dermatologic diagnosis.

Unlike other imaging tools, the dermatoscope is not a sophisticated device only available in specialized clinical settings. Dermatoscopes can be found anywhere the diagnosis of skin diseases takes place—in big hospitals but also in private offices, from the biggest city to the smallest village, and in research centers and purely clinical settings. It is used by experts and novices, by specialists and residents, in live consultations and teleconsultations. In any place, in any way, and at any time that diagnosis of skin tumors or other diseases occurs, dermatoscopy is there.

As doctors, we are privileged to live in an era in which scientific information is accessible and can be acquired through several channels. Therefore, the current book does not contain any information that cannot be found in other sources, and it is not a summary of our previous research efforts.

In this book, we tried to provide essential information on the dermatoscopy of skin tumors and other diseases in a structured way, filtered by our conceptual views that undoubtedly are objective. Therefore, we invite all our readers to read it critically and always keep in mind that any established knowledge might be challenged in the future.

We hope you will enjoy reading.

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Introduction to Dermatoscopy

Fundamental principle

Dermatoscopy should be considered as an integral part of the clinical dermatologic examination, and the interpretation of the dermatoscopic criteria is meaningful and helpful only within the clinical context of each particular patient. Knowledge of dermatoscopy is by no means a substitute for basic knowledge about pathogenesis, epidemiology, clinical morphology, and histopathologic features of skin tumors and other cutaneous diseases. On the contrary, dermatoscopy enriches and complements the cognitive framework of the physician on skin diseases.

1.1 Device

The dermatoscope is a handheld device with 10-fold magnifying optics, combined with a transilluminating light source. The expanded use of dermatoscopy among clinicians is based on the following important strengths: it is a fast and effective method applied with a small and inexpensive device. Therefore, the dermatoscope should be considered not as an imaging device but as a clinical tool that can be routinely used on all skin lesions by any physician dealing with skin disorders, acquiring a role similar to the stethoscope of physicians.

Digital dermatoscopic devices (videodermatoscopes) that allow much higher magnifications (up to ×200) also exist. Although these devices provide further insights into the morphology of skin lesions, they lack three important properties of the handheld dermatoscope: they require some time, space, and cost. Therefore, these devices are not convenient for use on all skin lesions during the daily routine. Instead, digital dermatoscopy has specific indications that are discussed in some chapters of this book. All the patterns, structures, features, or criteria described in this book can be seen with a handheld dermatoscope, unless otherwise clarified in the text.

1.2 Basic Parameters

The use of the dermatoscope reveals a morphological world of macroscopically invisible structures and criteria. The dermatologic patterns are composed of two basic parameters:

colors and morphological structures.

1.2.1 Colors

Considering skin color as "neutral," skin lesions are typically divided into two main categories: pigmented and nonpigmented. Pigmented lesions are characterized by one of the following colors: black, brown, blue, or gray (Figures 1.1 through 1.4). Nonpigmented lesions are characterized by the presence of white, red, and yellow or orange (Figures 1.5 through 1.8). Obviously, a lesion may be partially pigmented and partially not. The general rule is that when pigmented structures are present, they are usually diagnostically more important than nonpigmented ones; therefore, they should be evaluated first (Figure 1.9).

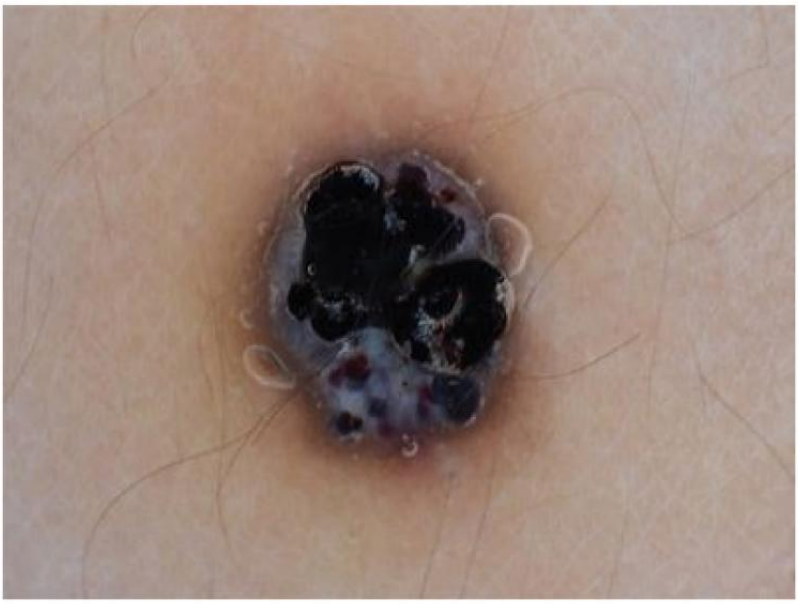

FIGURE 1.1 The black color in dermatoscopy. In this example, it corresponds to coagulated blood (angioma).

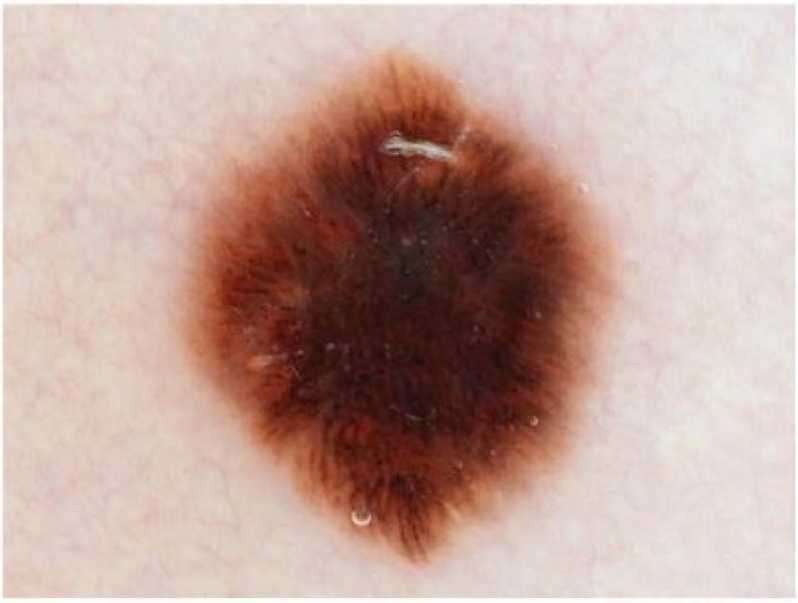

FIGURE 1.2 The brown color in dermatoscopy. In this example, it corresponds to melanin (nevus).

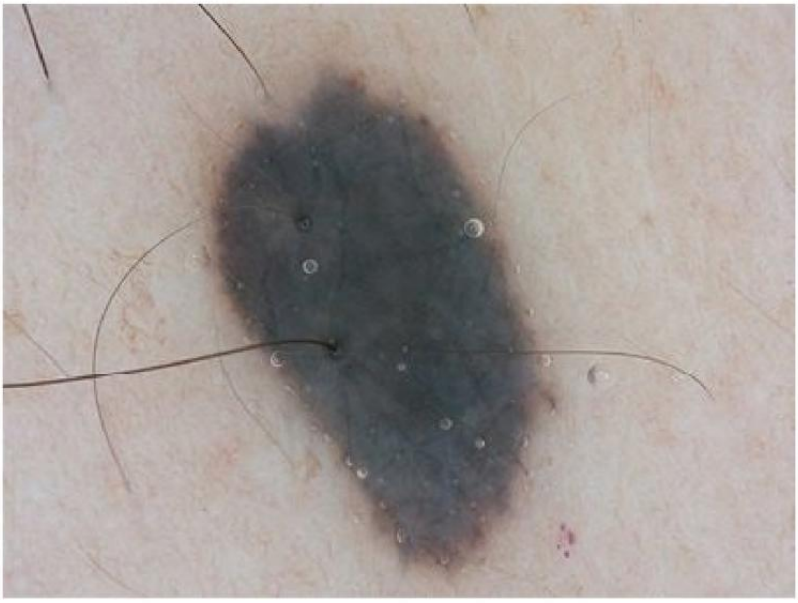

FIGURE 1.3 The blue color in dermatoscopy. In this example, it corresponds to melanin (nevus).

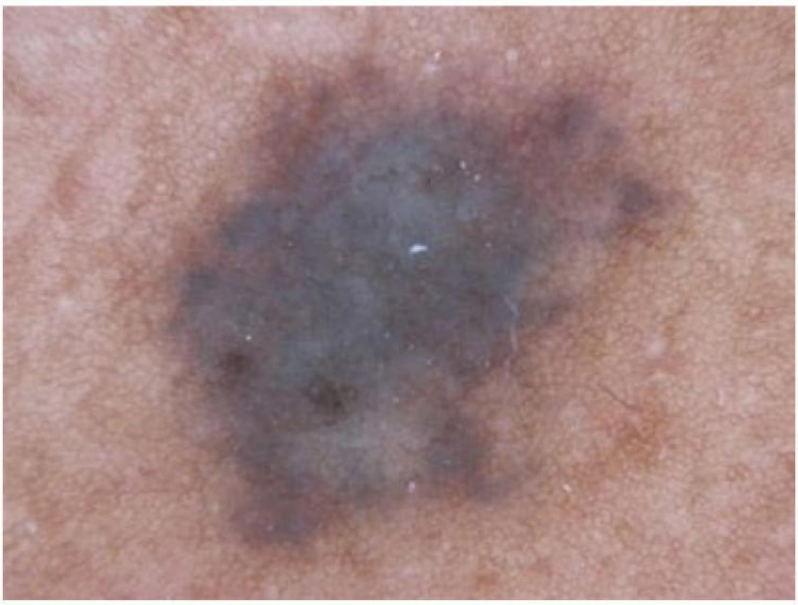

FIGURE 1.4 The gray color in dermatoscopy. In this example, it corresponds to melanin (nevus).

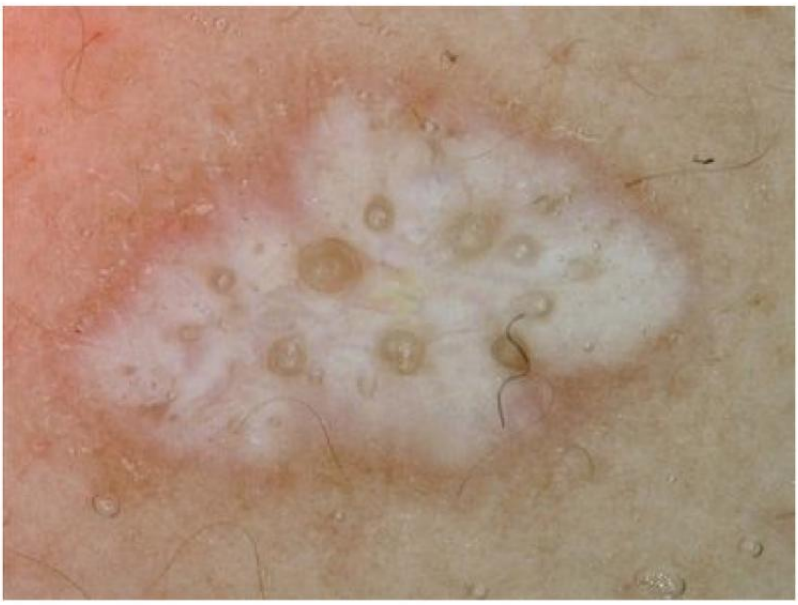

FIGURE 1.5 The white color in dermatoscopy. In this example, it corresponds to fibrosis (lichen sclerosus).

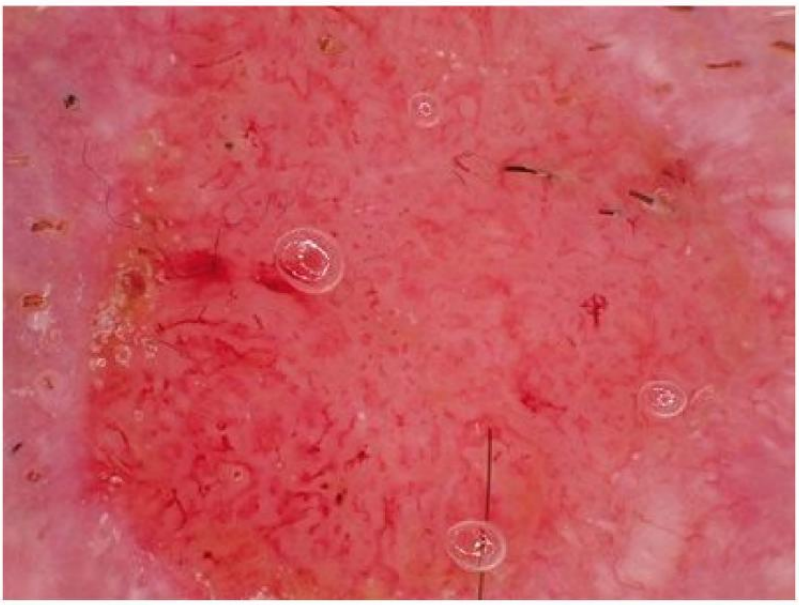

FIGURE 1.6 The red color in dermatoscopy. In this example, it corresponds to vessels (squamous cell carcinoma).

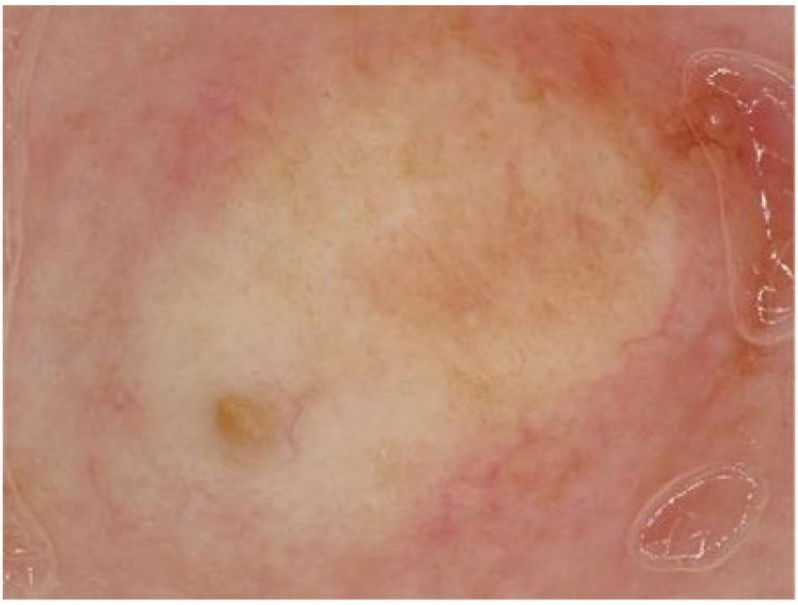

FIGURE 1.7 The yellow color in dermatoscopy. In this example, it results from sebum (sebaceous cyst).

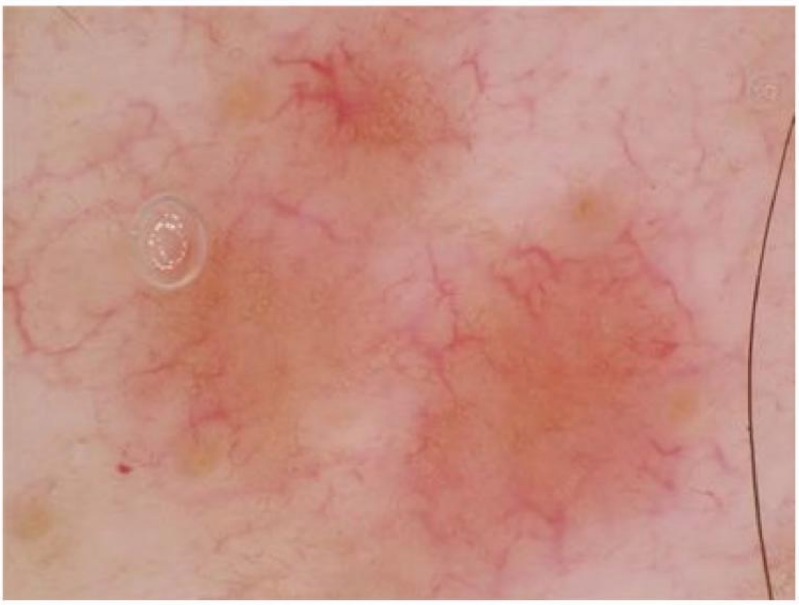

FIGURE 1.8 The yellow-orange color in dermatoscopy. In this example, it corresponds to cutaneous granulomas (sarcoidosis).

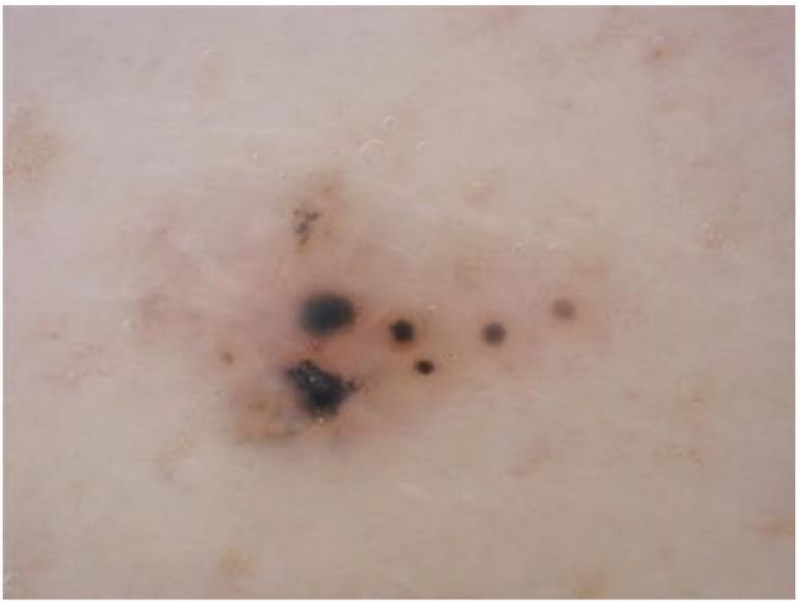

FIGURE 1.9 This lesion is only partially pigmented (blue color). However, the pigmented structures are diagnostically highly valuable (basal cell carcinoma).