
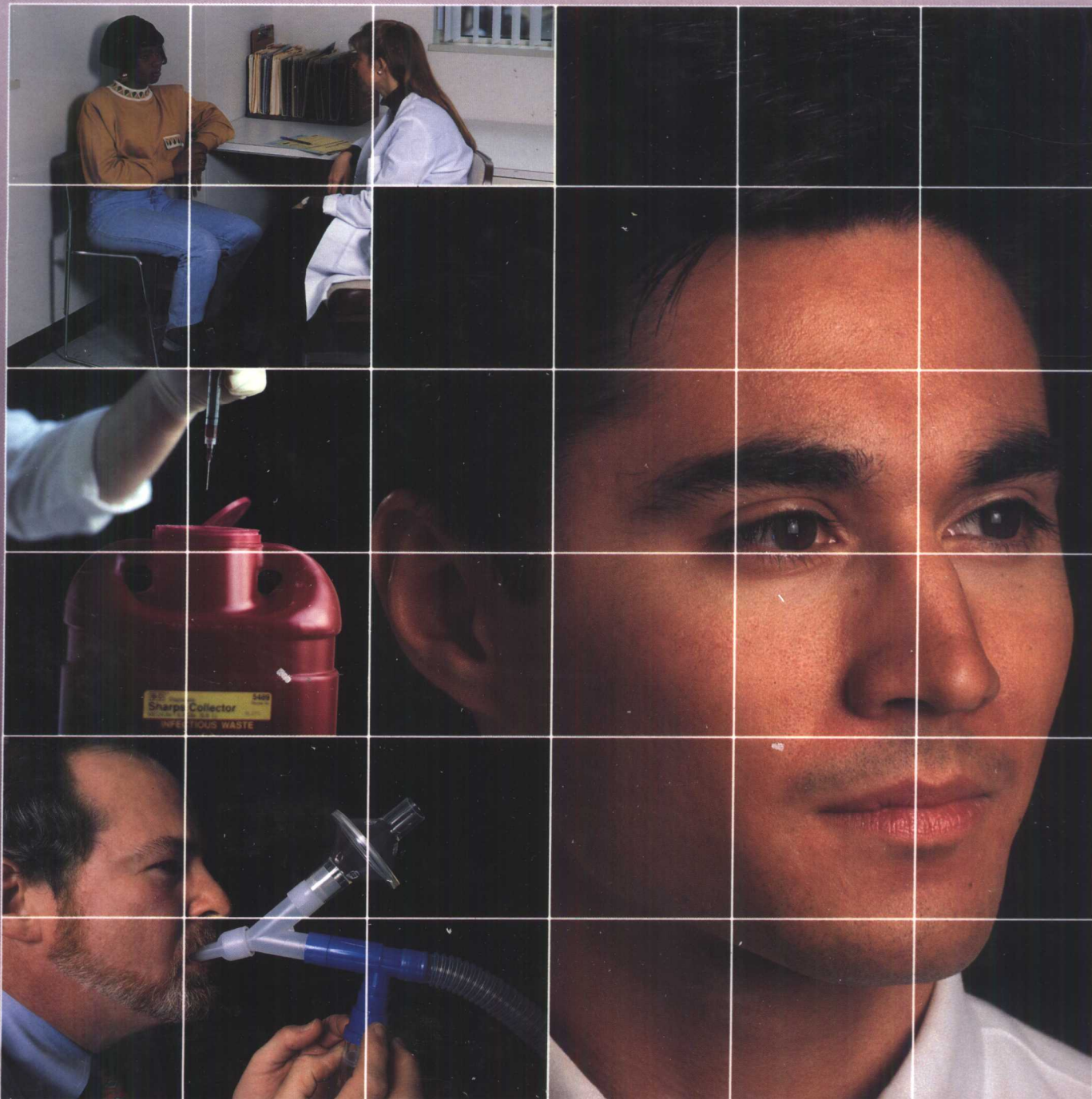


AIDS AND HIV INFECTION

 Mosby's Clinical Nursing Series



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AIDS AND HIV INFECTION

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PREFACE

The choice of content for this book was, in part, based on research conducted by Deanna Grimes and James Halloran, the author of Chapter 10. Dr. Grimes and Mr. Halloran conducted nine separate focus groups with nurses experienced in HIV/AIDS care. The nurses who participated in the focus groups practiced in hospitals, outpatient HIV clinics, nursing homes, public health agencies, and home health care. During the group sessions, the nurses focused on the question "What are the critical knowledge and skills that nurses need to deliver safe, adequate nursing care to persons with HIV disease?" The authors are extremely grateful to these busy nurses who shared their time, knowledge, and insights.

These experienced HIV nurses expressed a need for a ready reference to conditions that should alert them to the potential for HIV infection in patients. We have tried to respond to this need by providing color plates of most of the visible conditions that are associated with HIV infection. Many of these conditions, such as Kaposi's sarcoma, were quite rare prior to the HIV epidemic and, often, have never been seen by health care providers who are not involved in HIV care. The color plates can be a ready reference for nurses new to HIV care.

Almost all of the focus groups expressed a desire to better understand the function of the immune system. So much new knowledge about immunology is constantly becoming available that it is difficult to stay current in the area. Fortunately, the National Cancer Institute and the National Institute of Allergy and Infectious Disease have co-authored a booklet called "Understanding the Immune System," which has been updated frequently to reflect expanding knowledge of this complex system. The Institutes have given permission to reproduce their booklet, and it appears, with slight modifications, as Chapter 1 of this book.

Nurses practice in a variety of specialized settings (e.g., inpatient, outpatient, and home care), providing care to patients at varying stages of disease. During the focus groups nurses expressed a need to understand all phases of infection, even though they may only be caring for patients at one phase, such as acute care or end-stage disease. Therefore, Chapters 2, 3, and 4 were developed. Chapter 2 provides an overview of HIV infection, its progressive phases, pathophysiology, modes of transmission, epidemiology, and management. Chapter 3 describes the opportunistic diseases

and conditions associated with impairment of the immune system, which eventually result in the acquired immunodeficiency syndrome (AIDS). This chapter also presents the common psychological responses that accompany progression to AIDS. Chapter 4 provides a brief overview of the bacterial, mycobacterial, protozoan, fungal, and viral infections that occur during HIV infection. Together, these four chapters provide the scientific base for the remainder of the book.

Chapter 5 focuses on patient assessment and general diagnostic procedures that may be applied at any time during the course of infection. Specific instructions are given about procedures for collecting and handling of specimens of body tissue, fluids, and exudates.

In the pre-antibiotic era, there was a common saying that, if a physician knew syphilis, he or she knew all of internal medicine. This was true because syphilis could manifest dermatologically, neurologically, cardiovascularly, etc. In the postretroviral era of HIV, one can say that, if a nurse knows HIV/AIDS care, he or she knows all of nursing. This disease calls upon all of one's nursing knowledge and skills because the effects of this infection can manifest in almost every body system and at any stage of life. Chapters 6, 7, 8, and 9 cover the major systems (dermatologic, gastrointestinal, neurologic, and respiratory systems, respectively) and the HIV-related conditions associated with each system. Each of these chapters presents an overview table describing the conditions, a brief discussion of each condition, summary tables of the diagnostic studies, and the medical management for the conditions.

While HIV-related malignancies affect more than one body system, they have many characteristics in common. These are presented in Chapter 10, together with diagnostic tests and medical and nursing management of persons with HIV-related malignancies.

Nursing HIV-infected persons involves caring for individuals who, during the long course of the infection, will experience pathology in almost every body system. Consequently, their nursing caregivers may diagnose and intervene in a wide range of patient problems, many of which coincide in time. For this reason, nursing management was consolidated into one chapter. Chapter 11 presents a complete nursing care plan for the extensive nursing diagnoses that many occur sometime during HIV infection.

Much of the early information about HIV disease was developed from experience of caring for HIV-in-

infected homosexual men. Recently, however, the epidemic in the United States has been affecting more and more injecting drug users and women. Chapter 12 discusses the issues associated with providing care to these two groups, with emphasis on epidemiologic, diagnostic, and social considerations for these populations.

Chapter 13 presents the legal issues associated with HIV/AIDS, from the standpoints of the health care worker, the employer, and the HIV-infected person. Legal issues of concern to HIV-infected persons include power of attorney and living wills.

Chapter 14 focuses on infection control to safeguard health care workers and patients. It contains recommendations from the Centers for Disease Control on universal precautions, category-specific isolation procedures, and controlling transmission of tuberculosis in the health care setting.

Chapter 15 highlights some of the technical therapeutic procedures (aerosolized pentamidine, chemotherapy, total parenteral nutrition, and vascular access devices) most frequently used by nurses in caring for HIV-infected patients. Each procedure is described, together with its indications and contraindications, administration techniques, safety issues, and implications for patient teaching.

Because of the variety of opportunistic organisms and infections associated with HIV, an arsenal of antiinfective drugs is utilized. Chapter 16 describes the major antiinfective drugs that are presently approved for use in the United States. Drugs are grouped by cat-

egory of action (e.g., antiviral, antifungal) into tables for quick reference. Tables delineate chemical and brand names as well as routes of administration. The chapter provides further details on each drug or drug category's indications and contraindications, precautions, side effects, adverse reactions, pharmacokinetics, and interactions, and the nursing considerations for administering the drug.

Chapter 17 contains 18 patient teaching guides, which can be copied and distributed to patients. These cover a wide range of topics that may be encountered at different phases of HIV infection, such as male and female condoms, HIV testing, food safety, taking antiretroviral drugs, and caring for an implanted port.

We began this preface with a discussion of the valuable assistance provided to the authors by a large number of experienced HIV nurses. These nurses identified the critical knowledge base for HIV nursing in the hospital, nursing home, clinic, and home. But these nurses have provided the authors with more than just information. They and their nursing colleagues, who have been involved in this epidemic, have inspired us. We stand in awe of all nurses providing HIV/AIDS care. We admire your professional dedication, caring, and concern. We dedicate this book to you in recognition of your living out the best traditions of nursing.

Deanna E. Grimes
Richard M. Grimes

COLOR PLATES

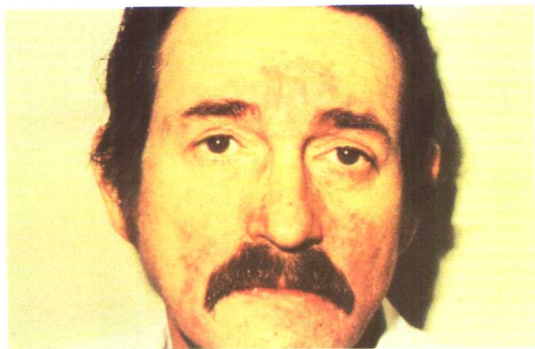


PLATE 1 Drug reaction on face.



PLATE 2 Drug reaction on hands and feet.



PLATE 3 Drug reaction on back.



PLATE 4 *Staphylococcus aureus* "impetigo" on face.



PLATE 5 *Staphylococcus aureus* "boil" on forehead.



PLATE 6 Severe psoriasis on arm.



PLATE 7 Herpes zoster "shingles" on hip.



PLATE 8 Severe herpes zoster "shingles" in male.



PLATE 9 Erythema multiforme on hands.



PLATE 10 Erythema multiforme on penis of male with herpes.



PLATE 11 Herpes corona.

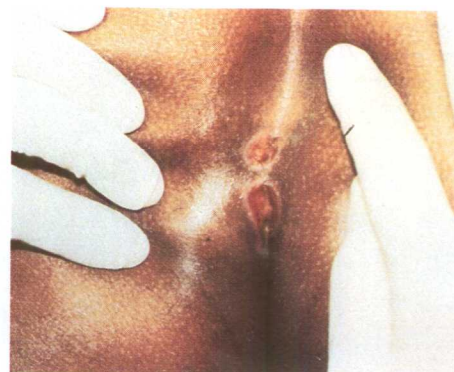


PLATE 12 Anal herpes.

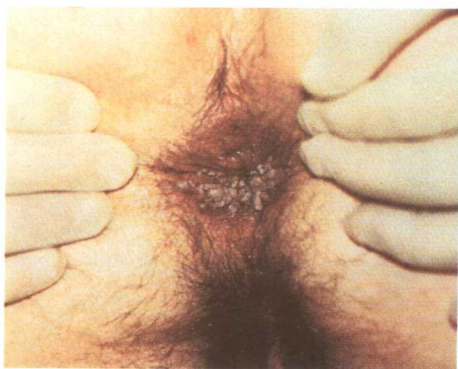


PLATE 13 Anal condylomata "warts."

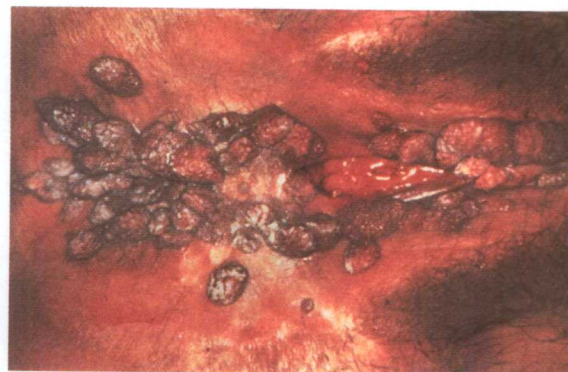


PLATE 14 Genital condylomata "warts" in female.

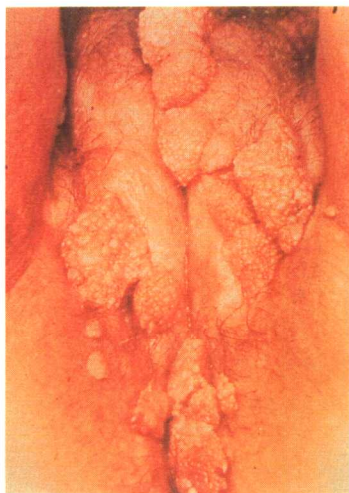


PLATE 15 Genital warts in female.



PLATE 16 Genital warts in male.

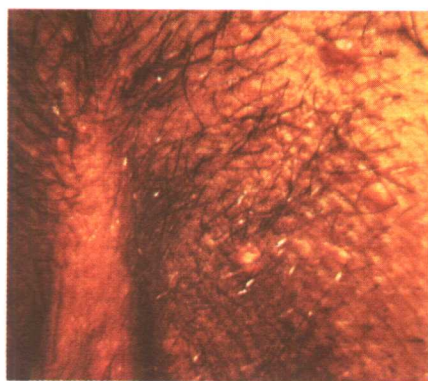


PLATE 17 Molluscum in male.



PLATE 18 *Candida* vulvitis.



PLATE 19 Primary syphilis—chancre on labia.



PLATE 20 Secondary syphilis—rash on hands.



PLATE 21 Herpes simplex lesion of lower lip—second day after onset.



PLATE 22 Herpes on chin.

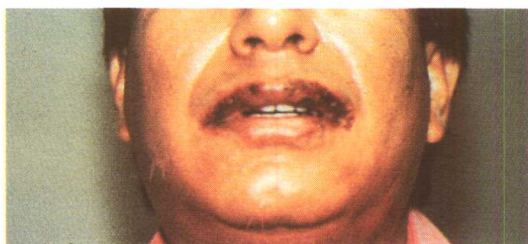


PLATE 24 Herpes on lips; person being treated with acyclovir.



PLATE 23 Herpes with crusting on face and lips.



PLATE 26 Severe oral/facial herpes on day that patient died.



PLATE 25 Severe oral/facial herpes resistant to acyclovir.

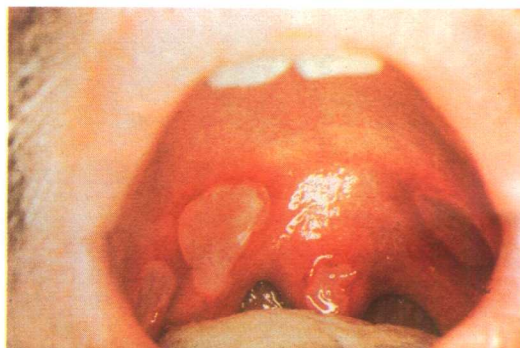


PLATE 27 Recurrent aphthous ulcers.



PLATE 28 Hairy leukoplakia on tongue.



PLATE 29 Severe pseudomembranous candidiasis of tongue.

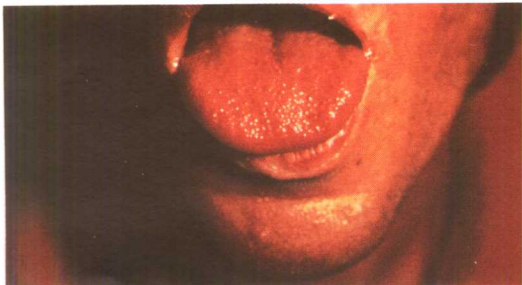


PLATE 30 Candidiasis of tongue in patient in Plate 29 after 48 hours of treatment with fluconazole.

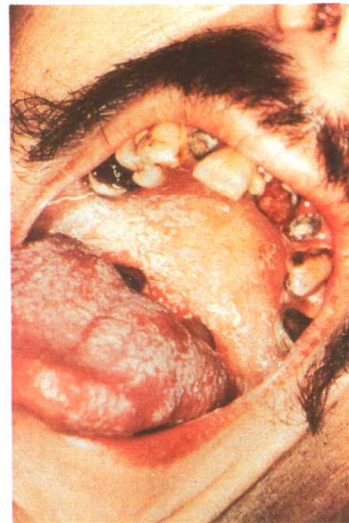


PLATE 31 Fluconazole-resistant candidiasis.



PLATE 32 Gingivitis.

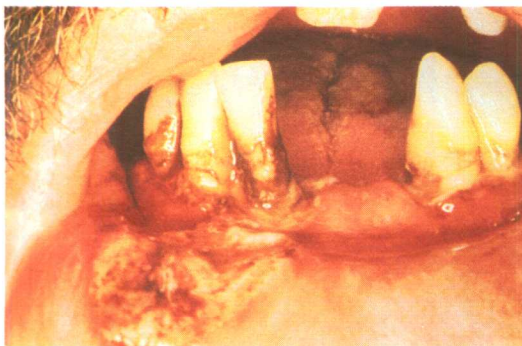


PLATE 33 Periodontitis.



PLATE 34 Severe wasting.

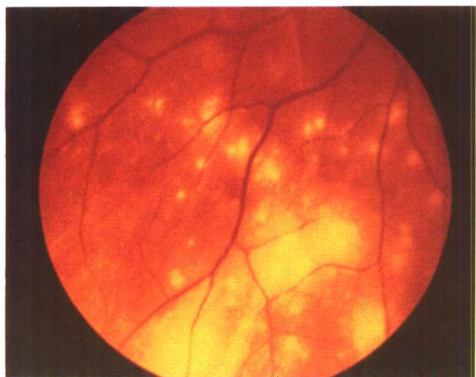


PLATE 35 CMV retinitis.



PLATE 36 Kaposi's sarcoma of heel and lateral foot.



PLATE 37 Kaposi's sarcoma on face.



PLATE 38 Lymphoma on neck.

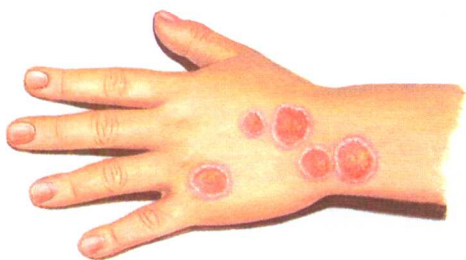


PLATE 39 Annular formation (annular granuloma).



PLATE 40 Linear formation (psoriasis linearis).



PLATE 41 Clustering of lesions (herpes zoster).

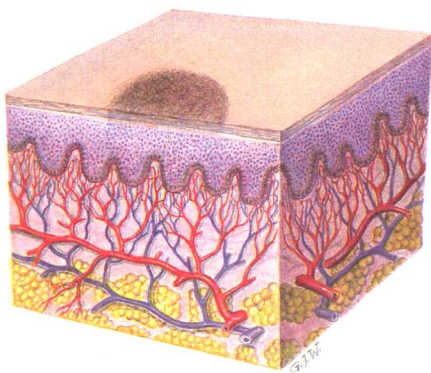


PLATE 42 Macule.

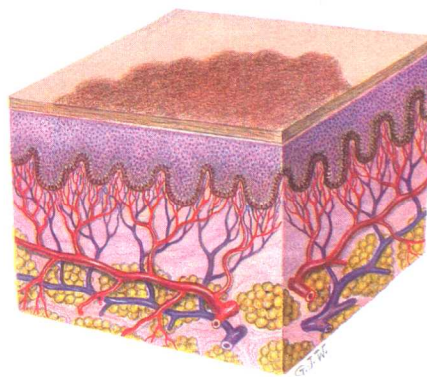


PLATE 43 Patch.

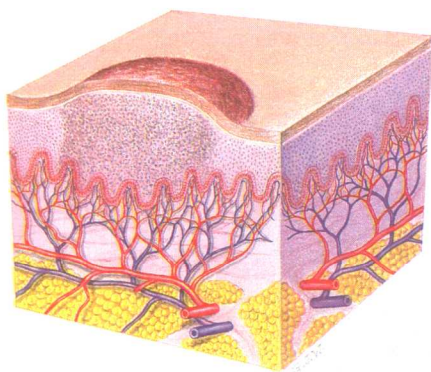


PLATE 44 Papule.

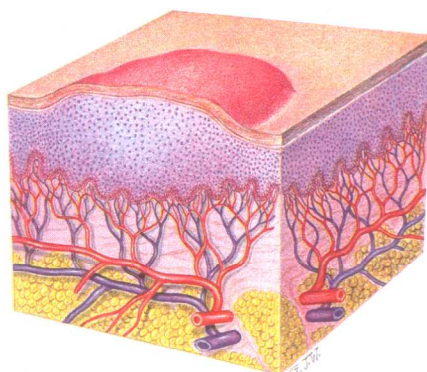


PLATE 45 Wheal.

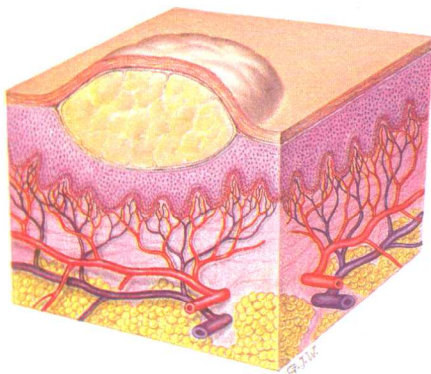


PLATE 46 Tumor.

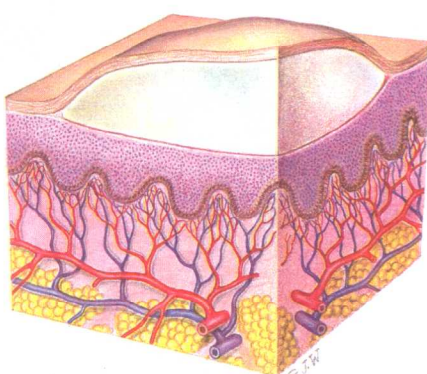


PLATE 47 Bulla.

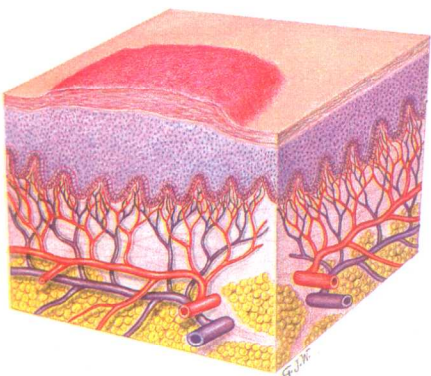


PLATE 48 Plaque.

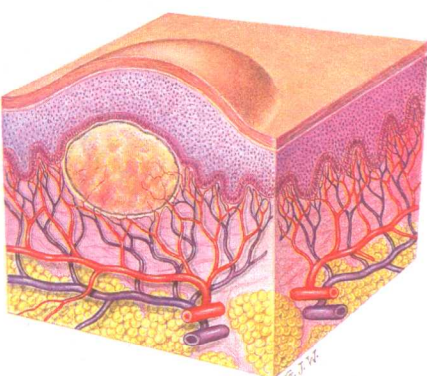


PLATE 49 Nodule.

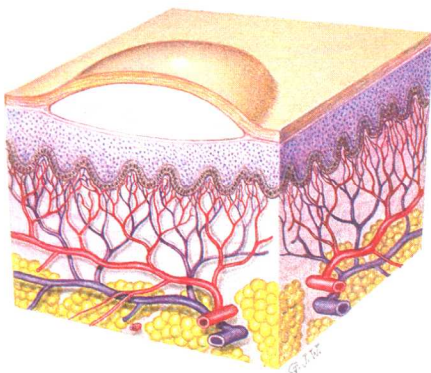


PLATE 50 Vesicle.

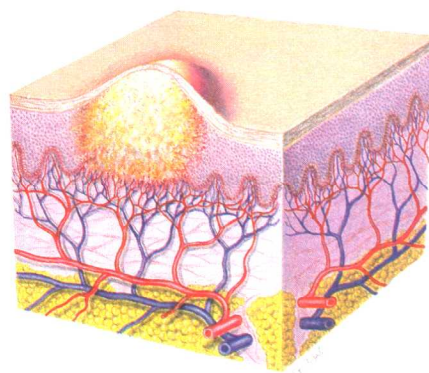


PLATE 51 Pustule.

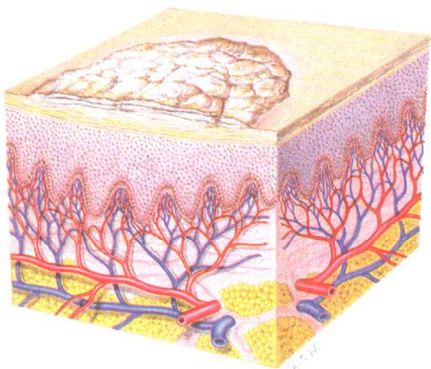


PLATE 52 Scale.

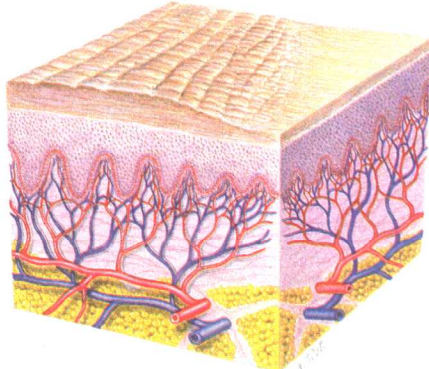


PLATE 53 Lichenification.

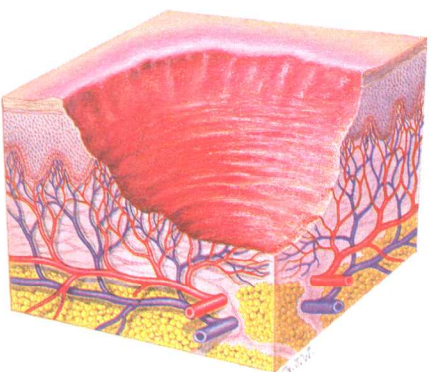


PLATE 54 Ulcer.

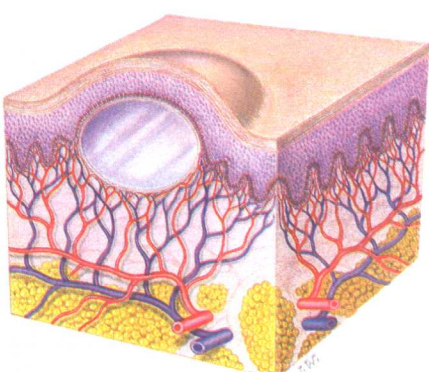


PLATE 55 Cyst.

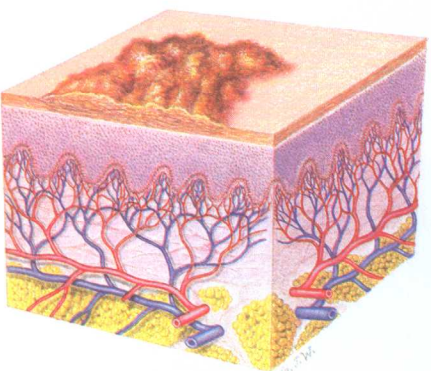


PLATE 56 Crust.

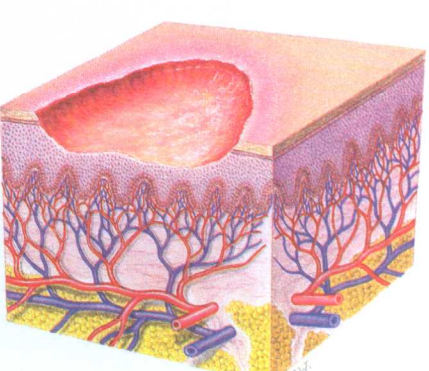
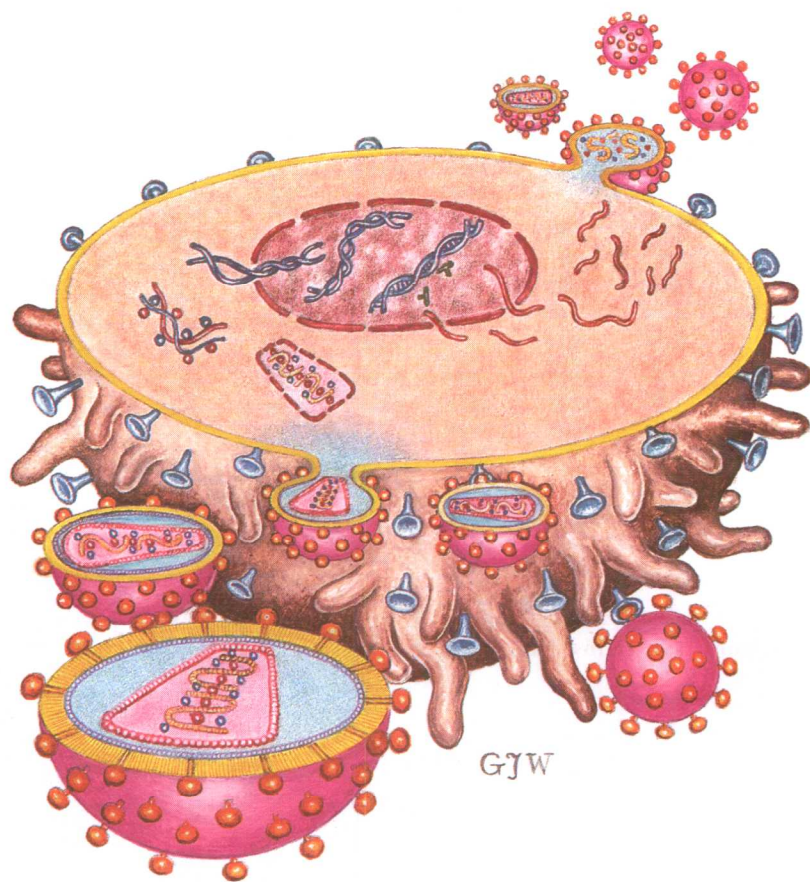


PLATE 57 Erosion.



AIDS VIRUS LATCHING ONTO A CD4+ CELL AND REPLICATION CYCLE

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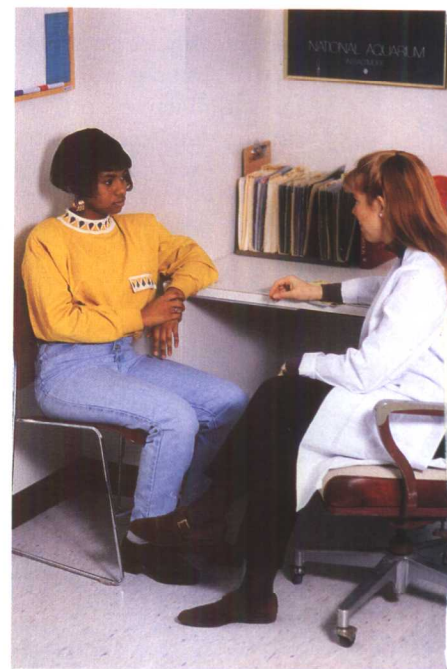
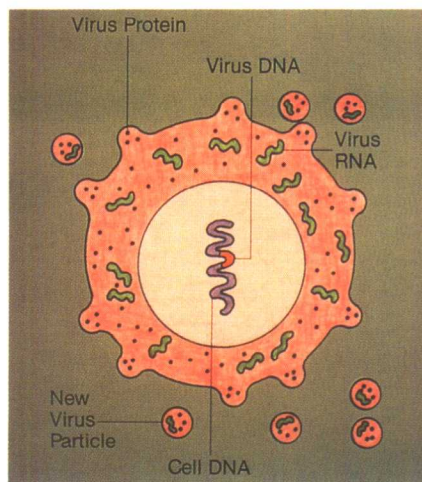
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