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Dermatology for the General Surgeon **563**

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Preparation of the patient with preexisting skin disease for surgery can be challenging. In addition to encountering the skin with nearly every procedure, the surgeon will also likely experience skin-related conditions, concerns, and associated conditions in the preoperative, perioperative, or postoperative periods. These concerns are reviewed using best available evidence.

Local Anesthetics: Uses and Toxicities **587**

Alan Harmatz

Surgeons are asked to do more and larger procedures as outpatient procedures as the economics of medicine evolve. Indeed, we all carry out procedures on an outpatient basis that only a short time ago we would consider only on an inpatient basis. Further, procedures that had previously been performed under a general anesthetic are now being performed under local anesthesia. A good working knowledge of local anesthetics (LAs) will better enable the surgeon to meet those demands and to do so in a way that will enhance the patient's safety, experience, and comfort. Although the focus of this issue of Clinics is minor surgery, any meaningful discussion of LAs has to go a little further than a 3-mL syringe and a small amount of lidocaine.

The Physiology of Wound Healing: Injury Through Maturation **599**

Paige Teller and Therese K. White

Wound healing has evolved from a science of clinical observation to a study of molecular biology and cellular physiology. This article will review the medical literature to provide a basis for understanding the current science of wound healing.

The Science of Wound Bed Preparation

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Jaymie Panuncialman and Vincent Falanga

The concept of wound bed preparation (WBP) heralded a new era in terms of how we treat wounds. It emphasized the difference between acute and chronic wounds, and it cemented the idea that the processes involved in the healing of acute wounds do not apply completely to the healing of chronic wounds. The arbitrary division of the normal healing process into the phases of hemostasis, inflammation, proliferation, and maturation addresses the events in acute wound healing. We have realized that the impediments to healing in chronic wounds lead to a failure to progress through these phases and are independent factors that make the chronic wound a much more complex condition. A major advance in resolving or addressing the chronic wound has been the concept of WBP. WBP allows us to address the problems of wound healing individually the presence of necrotic tissue, hypoxia, high bacterial burden, corrupt matrix, and senescent cells within the wound bed. In WBP we can optimize our therapeutic agents to accelerate endogenous healing or to increase the effectiveness of advanced therapies.

Suture Choice and Other Methods of Skin Closure

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Julio Hochberg, Kathleen M. Myer, and Michael D. Marion

Suture application varies for different tissues, different patients, and different circumstances. The large array of new sutures, staples, tapes, and topical adhesives can make the proper choice for closure a challenge. This review of the available materials for skin closure, and their biomechanical properties, advantages, and disadvantages, creates a structure for better understanding of the limitations, indications, and numerous choices to be considered before choosing a suture material.

Skin Flaps

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Mary Tsochi, Erik A. Hoy, and Mark S. Granick

Open wounds, particularly around the face, often require complicated techniques for optimal closure. The approach to the closure of the complicated wound depends largely on the nature of the wound, including the location and size of the defect, the functional outcome after closure, the medical comorbidities of the patient, neighboring structures, and whether the defect is secondary to a malignancy or trauma. The goals of wound management are optimal aesthetic outcome, preservation of function, and patient satisfaction. The authors briefly review basic skin closure options and discuss use of skin flaps, particularly of the head and neck region.

Management of Acute Wounds 659

Charles K. Lee and Scott L. Hansen

The acute wound presents a spectrum of issues that prevent its ultimate closure. These issues include host factors, etiology, anatomic location, timing, and surgical techniques to achieve successful wound closure. Basic surgical principles need to be followed to obtain stable, long-term coverage, ultimately restoring form and function. Recent advances in dressings, debridement techniques, and surgical repertoire allow the modern plastic surgeon to address any wound of any complexity. This article discusses these principles that can be applied to any wound.

Benign Skin Lesions: Lipomas, Epidermal Inclusion Cysts, Muscle and Nerve Biopsies 677

Kartik A. Pandya and Frederick Radke

Lipomas are benign skin tumors composed of mature fat cells and are the most common subcutaneous tumors. Although many of these can be removed in the surgical clinic or minor operating room, some require more advanced preoperative planning and more complicated resection. The diagnosis, pathology, and treatment of benign tumors, and other commonly associated tumors that may require a more substantial workup and operative intervention, are discussed. Muscle and nerve biopsies are used for the diagnosis of a variety of medical problems. Although there are other genetic and biochemical markers now available that can diagnose diseases previously proven by biopsy, these surgical techniques still have appropriate uses. Although the procedures are straightforward, there are important technical issues to assist in getting the best specimen to avoid confounding disease diagnosis.

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Alfonso L. Velasco and Wade W. Dunlap

Pilonidal disease and hidradenitis suppurativa are common problems that affect young adults. The surgical management of pilonidal disease should be tailored to the individual clinical presentation and its goal is the resolution of pilonidal disease with low recurrence and low morbidity. The clinical course of hidradenitis suppurativa is characterized by chronicity with frequent flare-ups followed by quiescent periods. Treatment for both conditions needs to be individualized to the clinical presentation.

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Unusual Skin Tumors: Merkel Cell Carcinoma, Eccrine Carcinoma, Glomus Tumors, and Dermatofibrosarcoma Protuberans	727
Jesse L. Kampshoff and Thomas H. Cogbill	
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