

CLINICS IN PLASTIC SURGERY

JULY 1977

WOUND HEALING

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Denys Montandon, Gerald D'Andiran, and Giulio Gabbiani

Much more than a purely intellectual exercise, the studies described have opened new possibilities for the prevention and treatment of distressing situations such as burn wound contractures, tracheal stenosis, periprosthetic capsular retraction, and others.

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The nature of scar tissue varies so that it is essential to distinguish defective scars which can be corrected surgically from pathologic scars which represent a biological disorder, if one wants to avoid a therapeutic misunderstanding. The quality of the wound closure cannot, in any case, guarantee the quality of the scar.

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Juha Niinikoski

The rate of healing is known to be a function of arterial oxygen tension over a certain, physiologic range. Moderate tissue hyperoxia seems to support host defense mechanisms against infection, enhance cross-linking of collagen, and stimulate epidermal regeneration.

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Stanley M. Levenson and Eli Seifter

Only by lessening the severity of the injury—by modifying an individual's resistance to injury or by preventing or correcting metabolic and nutritional alterations and lowered local and systemic resistance to infection induced by the injury—can we set the stage for uncomplicated wound healing.

THE HEALING OF BURN WOUNDS..... 389

Paul S. Baur, Donald H. Parks, and Duane L. Larson

The human burn wound healing process can best be studied only in man. Because of this, the pertinent cytologic, biochemical, and physiologic research cannot be conjured or planned but must depend upon the availability of burn victims willing to participate in research endeavors.

THE HEALING OF SKIN GRAFTS..... 409

Jiří Šmahel

Current knowledge of the processes involved in skin autograft healing is reviewed. Some special features noted in the healing of epidermal, dermal, composite, and expanded grafts are described, as well as the tactics used to improve skin graft healing.

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J. Lindner

Connective tissue research during the past two decades has contributed to greater understanding of the basic processes of every kind of wound healing. Primary fracture healing by osteosynthesis is one of the important areas studied, but most investigations and results have been concerned with so-called secondary fracture healing.

TENDON HEALING..... 439

J. C. van der Meulen and P. A. Leistikow

Experience and research have indeed shown us that in this particular type of wound repair, technique alone is not sufficient to achieve adequate restoration of function. Remodeling of scar tissue is also needed when tendon gliding is to be reproduced.

HEALING OF NERVES 459

Hanno Millesi

Healing of a transected nerve can occur in two different ways. Under favorable conditions healing occurs with delicate reconstitution of the epineural perineural layer without thickening. The other way involves healing by formation of an irregular matrix between the stumps which is transformed to a more or less wide endoneural scar.

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