the fractures of the carpal scaphoid bone. The aim of the article is to establish certain principles of their approach toward the diagnosis of these fractures which cannot be obtained by the usual, accepted methods. In every case in which suspicion of a lesion of this bone is clinically manifest, and in which the usual positions show a structural change, the patient undergoes a thorough examination roentgenologically with the tube set in different positions for "searching", i.e., projection of the tube in the direction of the possible fracture line. Better distinction between the parts of the fractured bone has been made possible in many cases by various projections.

Four cases are presented to demonstrate the value of roentgenography with projection of the tube at various angles to make visualization of the fracture line possible.


The author discusses indications for amputation and plastic repair in injuries of fingers. Age and occupation of the injured and localization and size of the soft tissue defect are significant for decision. Especially important is the cover by skin capable of offering resistance to later functional use and the maintenance of at least a protective sensibility. This is obtained by local pedicle flaps or full-thickness skin grafts depending on the depth of the wound and the necessity of later reconstructive operations. Although defects on the dorsum of finger are usually covered by free skin grafts, pedicle flaps are used in the volar aspect, chiefly cross-finger flaps. The technique is described with emphasis on the importance of a "closed wound system" by covering not only the donor site, but also the back of the pedicle. The donor site for full-thickness skin grafts is the inner surface of the upper arm. Abdominal pedicle flaps are not recommended for fingers, whereas the cross-arm flap gives good results in special cases.

K. Schuchardt, M.D.


The author reports on anatomical investigations in normal cadaver hands and specimens of tissues removed by operation in cases of Dupuytren's contracture. The network of connective tissue in the palm is crossed by collagenic fascicles in several directions. The variable fascicles show marked differences in structure and attachment in the ulnar and radial parts of the hand. The cords in Dupuytren's contracture correspond to the course of the fascicles; they are not neoplasms, but thickened fascicles.

The disease starts with a degeneration of the elastic fibers in the collagenic fascicles; these undergo a thickening and hyalinization. In consequence of the considerable thickening there develop local disturbances of metabolism with change of the protein in the collagenic substances leading to an autogenous sensitization. In support of this theory are the positive reactions to intracutaneous injection of a suspension of the contracture tissue in patients suffering from Dupuytren's contracture. The reaction is absent in healthy persons. The morphologic consequence is a local cell proliferation with attempt to formation of new collagenic fascicles. This gives rise to a scarlike shrinking and to a vicious circle because the new fascicles undergo the same changes in metabolism. The cause of the beginning degeneration of the elastic fibers is due to heredity.

K. Schuchardt, M.D.


After brief discussion of several theories of pathogenesis of congenital anomalies of the extremities, the methods of T. D. Cronin (1943, 1956) and T. B. Bauer, J. M. Tondra, and H. M. Trusler (1956) for correction of syndactyly are described. The older methods (Didot, Zeller and Dieffenbach) without skin grafting are inadequate because they do not form a wide web and thus produce scar contractures. To prevent these the incisions must not be made...
straight but in a zig-zag fashion. The remaining raw areas are covered by full-thickness skin grafts.

The optimal time for the operation is the age of six. Only in cases with syndactyly of fingers of different length (thumb-index finger, ring-little finger) is it necessary to operate earlier to prevent deformities.

K. Schuchardt, M.D.

**WOUND HEALING**


Negative pressure drainage in plastic surgery offers several advantages. It actively encourages evacuation of fluid from all types of wound, and the negative pressure both splints the tissues and encourages firm adhesion between healing surfaces. It therefore takes over the function both of the pressure dressing and the open drain.

As the use of suction became routine, it was obviously impracticable to have large numbers of electric pumps or other cumbersome apparatus in the ward. Therefore, the following simple system has evolved, and it appears to work efficiently. A no. 3 or no. 4 polythene tubing is introduced into the wound in such a way that all parts are drained. A short, tight-fitting rubber cuff is slipped over the tube and passed up to the point where it enters the skin. A separate stab wound is always used. The rubber cuff can be stitched to the skin edge; the drain is firmly held, and is not perforated by the stitch so that the vacuum is thereby maintained. Negative pressure is induced by means of a collapsible polythene bottle which can be obtained cheaply. The screw cap of the bottle is drilled, and a flanged empyema tube with the flange trimmed to fit the internal diameter of the cap is passed through the drill hole. The flange acts as an airtight seal when the cap is screwed on to the bottle. The free end of the empyema tube is connected to the drainage tube by means of a suitably sized mixing needle or cannula. To obtain suction, the bottle is tightly compressed, the tube is linked up, and negative pressure is distributed to the wound. Measurements show that up to 70 mm. Hg suction can easily be obtained.

The following operations are among those this method is routinely employed by the author: gland dissections, major extirpations of buccal and facial tumors, neck surgery, all flap and tube pedicle procedures, excisions of lymphedematous limbs, breast reduction, panniculectomy, palmar fasciectomy, tendon grafting, and all extensive hand operations. Suction drainage has even been tried under free grafts to avoid dressings.

Since the apparatus is attached to the patient he can be ambulant, and this in itself is an advantage over more elaborate methods. The bottles have a limited life and after several sterilizations lose their elasticity. The average, however, is six cases per bottle.

**EDITOR**

**TISSUE TRANSPLANTATION**


After homografts of skin in adult chickens and 4-day-old chicks, the sera of the grafted animals were shown to acquire the ability to agglutinate blood lymphocytes of the skin donors. This lymphoagglutinating activity of serum from homografted animals first appeared 2 weeks after grafting and reached a maximum at about 3 weeks. Chickens injected with pooled homologous splenic tissue also produced lymphoagglutinins in 2 to 3 weeks.

These preliminary results reported by the author indicate that the time of appearance of lymphoagglutinating ability of the sera is consistent with the idea that lymphoagglutination is caused by antibodies. These antibodies do not appear in the blood until after the destruction of skin homografts. Whether these antibodies may also be responsible for the destruction of homografts such as skin cannot yet be answered.

**EDITOR**