

a pad at the bend of the elbow. By these means the hæmorrhage is arrested; if it still persists, plug the wound in the palm; if this fails, tie the brachial artery.

*Whitlow.* In deep-seated digital inflammations over the first and second phalanges, the cause is either an inflammation of the flexor sheath, or it may have a periosteal origin. In inflammation over the anterior aspect of the terminal phalanx, the cause is periosteal, and the worst that can happen is necrosis of the terminal phalanx.

In all cases make your incision early, central and in the long axis of the finger. Relieve tension, and prevent spread of the inflammation from the flexor sheath on the finger to the common flexor sheath on the anterior aspect of the wrist. In periosteal cases early incisions prevent necrosis of the affected phalanx. Whitlows are infective conditions, and are due to a colony of micrococci. The periosteal whitlows are cases of acute suppurative periostitis.

Relieve the tension, and the evil effects of the pathogenic micrococci will soon subside; prevent sepsis caused by the entrance of septic organisms from the external air, and rapid healing will be the result. In patients who are liable to whitlows, as in people who suffer from boils and carbuncles, administer corrosive sublimate internally, it is a most powerful antifermentative.

In *inflammation of the common flexor sheath* relieve the tension by making an incision into the sheath in the forearm above the angular ligament. Take care and not injure in your incision the median nerve; adopt Hilton's method to avoid the risk. After opening the flexor sheath in the forearm, pass a curved probe-pointed bistoury from the wound under the angular ligament, divide it with the knife, and in this way the palmar tension is effectually relieved.

In *amputation* for injury or disease in the upper extremity, do not follow, at the cost of length, any special method of amputation; get your flaps as best you can, so as to obtain as long a stump as possible. The longer the stump the easier it is to fit on an artificial substitute. In severe injuries of the upper extremity in which an endeavor is made to save the limb, more especially in cases in which the line of fracture is oblique, or in which, from comminution of the bones, it is difficult to keep the fragments in accurate position, remember that the use of the extension apparatus is as valuable in the upper as it is universally acknowledged to be in the lower extremity. Thick sheet lead makes a most efficient splint, it can be easily moulded to the injured limb over the dressing; by its weight it steadies the limb and keeps it at rest.

In all *fractures* near the joints the soft tissues are to a certain extent saved from injury when the bone gives way, but still in all cases there must be some injury to the tendons, muscles, joint, and ligaments. These structures require, for the proper performance of their functions, nobility; prolonged rest to prevent any risk of non-union of the

fractured bone, may be followed by stiffness of the neighboring joint, by adhesions of the ligaments, and organized effusion into the sheaths of the tendons. The result is a united fracture with a stiffened joint.

Non-union of bone does not occur in consequence of occasional gentle passive movement along with massage, if in the intervals the parts are kept at perfect rest. Non-union is much more likely to occur if slight constant movement is allowed between the broken ends. For example in fracture of the shaft of the humerus, and in fracture of the shafts of the radius and ulna, it is important to keep the elbow-joint at rest by means of a rectangular splint. If the elbow-joint is not kept quiet, there is more or less *constant* movement at the seat of fracture. This movement is very different from gentle passive movement every second day, with perfect rest in the intervals, as in fractures in the region of the wrist, elbow, and shoulder.

In Colles' fracture allow the patient to move his fingers and thumb after the first week, and after ten days take off the splints every second day and move the fingers, thumb, and wrist-joint gently. Take off all splints at the end of 4 weeks. Too prolonged rest in this injury often ends, more especially in old people, in irremediable stiffening of the fingers, thumb, and wrist-joint.

In fractures into the elbow-joint early gentle passive movement at the end of a fortnight every second day prevents stiffness of the elbow-joints.

In fractures of the upper extremity of the humerus begin passive movement after a fortnight.

In *dislocation* of the thumb, backwards at the metacarpophalangeal joint, dorsi-flexion of the thumb, with pressure on the head of the dislocated phalanx, is the simplest way to treat the case. In dislocation of the fingers the extension is best made by means of a toy made of plaited strong grass, so arranged that it can be easily slipped over the finger, but when it is pulled upon it grasps the finger tightly.

Fractures of the third and fourth metacarpals are diagnosed with difficulty. They are best treated by an anterior splint. Oblique fractures of the phalanges are most troublesome. It may be necessary, in such cases, to apply extension. An anterior splint, carefully padded so that there may be no pressure on the ball of the thumb, stretching from the bend of the elbow well beyond the tips of the fingers, is fixed to the fore-arm by sticking-plaster. An elastic band is attached to the injured finger by sticking-plaster, and extension is kept up by fixing it to the extremity of the anterior splint.

In fractures of the phalanges utilize the neighboring fingers as lateral splints, padding carefully between the fingers so as to prevent discomfort, excoriation, and itching. Skin should never be allowed to remain any length of time in contact with skin. In fixing the arm to the trunk in fracture of the clavicle and in fracture of the upper extremity of the humerus, if a layer of lint is not