

## OUR PRIZE COMPETITION.

DESCRIBE MODERN METHODS YOU HAVE SEEN USED IN THE TREATMENT OF FRACTURES, AND THE CORRESPONDING NURSING CARE.

We have pleasure in awarding the prize this month to Mrs. A. M. Williamson, S.R.N., 2, Camp Terrace, North Shields, Northumberland.

We have also awarded a consolation prize of five shillings to Miss Winifred Moss, S.R.N., Ward Sister, The Royal Infirmary, Leicester, for an admirable paper which did not however conform to the number of words required.

### PRIZE PAPER.

Whatever methods are employed in the treatment of fractures our object must be the restoration of movement and function with the least possible pain and distress to the patient, bearing in mind the disabilities and deformities which are commonly seen in neglected or unskilfully treated cases.

The treatment and after-care of all fractures can be simply classified thus: 1. Diagnosis. 2. Reduction or setting. 3. Splinting. 4. Refunctioning.

X-Ray examination can be used for purposes of diagnosis or for verifying the correct position of the bones after setting.

It is the concern of the surgeon to set the broken bones in a true position to avoid shortening of the limb due to over lapping, and it is the special duty of the nurse to maintain the injured limb in the correct position to gain this complete union of the broken parts.

It is of the greatest importance that a fracture be reduced as early as possible before complications arise, such as secondary swelling. But if delay in receiving medical treatment is unavoidable then a splint should be applied, or some simple traction arranged, as with a sheet or towel fastened to the ankle or wrist, and the limb placed on a pillow and the foot of the bed elevated and a weight attached to the sheet or towel.

Splints should be simple and made to fit the patient. How often has the unfortunate patient been made to fit the splint because it was the only one available?

Two-piece splints of plaster of Paris are of the greatest value because they can be easily removed for inspection or for treatment, they help circulation, and they can be used throughout the whole course of treatment.

The time required to obtain union in bone varies with the age and condition of the patient and the position of the injury. For instance, it takes less time in children than in older people.

Usage of the injured limb will be encouraged when not contra-indicated by pain, swelling or redness, and massage, motion and exercises should be given throughout treatment under the doctor's guidance and instructions.

In the setting of the long bones after fracture the surgeon may decide to operate in order to secure the ends of bone by a metal plate, wire, or bone pegs. Or an external splint may be applied.

Extension by various methods is employed to obtain correct alignment.

Metal traction was used extensively for this purpose in fractures of the lower extremity during the War, but we now see extension more commonly applied simply by extending the leg and tying the extension

straps to the lower end of the splint and tightening them from time to time or again by elastic traction, as with the weight and pulley.

Compound fractures are complicated by chances of infection. The injured tissues should be thoroughly cleansed and an antiseptic applied, bearing in mind the fact that an antiseptic which is strong enough to kill organisms *in vivo* also kills the tissues.

Drainage is important in those compound fractures which result from motor and street accidents, and it is the nurse's duty to see that the gauze which is inserted as a drain is not left to act as a plug.

The nurse should exercise care to prevent wasting of the limb due to disuse, overtight bandages, or splints, by giving massage, electrical stimulation of the muscles and voluntary movement, and by using a light cradle to carry the weight of the bedclothes and prevent pressure on the patient's feet.

A surgeon's complete success in setting a fracture with good bone-union can be rendered useless if the nurse allows the patient to develop drop-foot or a stiff joint.

The patient who is suffering from a simple fracture is not ill in the sense that a pneumonia patient is ill but is rather "disabled" and possibly for a prolonged period, so that the nurse's skill will lie, not only in maintaining a good position for the injured limb, but in the case of the surrounding parts, in inducing movements and attending to all bony-projections which become painful during long confinement to bed.

But most of all she will help by rousing the patient's interest in matters outside the limitations of the sick-room, by making the patient feel normal again, and anxious to renew her normal activities.

The nursing of fractures in elderly people calls for very special care, because the patient may suffer from rheumatism or rheumatoid arthritis, with consequent stiffening of the joints, and lack of movement for even a short period in an unsuitable position may lead to permanent disability.

The long confinement to bed which the after care of some fractures entails is specially unsuited for old people because of the danger of a hypostatic pneumonia.

### CONSOLATION PRIZE PAPER.

Modern methods used in the treatment of fractures aim at the discovery of better and more uniform means of obtaining complete functional restoration in the shortest possible time.

Local anæsthesia has taken the place of general anæsthesia in many cases, its advantages including a more pronounced relaxation of the muscles. Also, this anæsthetic lasts from 2-3 hours, thus allowing the fracture to be manipulated two or three times until the required result is obtained. 50-60 c.cs. of a 2 per cent. novocaine solution can be used without any danger, and if the bone is broken in more than one place or more than one bone broken the solution is injected into the site of every fracture.

In cases of fracture of the long bones continuous extension on the limb for some time may be required to correct the deformity. In these cases skeletal traction has, to a large extent, taken the place of skin traction. Its advantages are that the force is applied directly to the bone itself, its point of contact with the

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