

Scientific Papers

A Rational Approach to Classification and Treatment of Fractures of the Surgical Neck of the Humerus

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SINCE the introduction of the hanging cast, there has been considerable controversy concerning the treatment of fractures of the surgical neck of the humerus. Furthermore, this type of fracture has been variously classified in current textbooks, according to the presence or absence of impaction of the fragments, abduction or adduction of the proximal fragment of the head, position of the distal shaft fragment or combinations of these anatomic positions. Treatment based on these classifications has been variable and includes simple support with slings and bandages, hanging casts, abduction "airplane" shoulder spicas and open reduction.

Because of the multiplicity of plans of treatment based on these classifications, we have adopted a simplified approach which is dependent on the presence or absence of contact between the fractured bony surfaces, regardless of impaction, angulation or rotation of these fragments. We do not believe that this is a new or radical concept in the treatment of this group of fractures but one which is rather commonly appreciated by others although it is not clearly defined in the literature.

Our classification of these fractures into contact or non-contact types has greatly simplified our method of management; it is

based on the belief that the fracture can be expected to heal rapidly and without incident if any contact of raw bone to raw bone is present. Therefore, in this instance, the preservation of shoulder function is most important. The earlier motion can be resumed after the fracture, the better will be the functional end result. On the other hand, if contact between fracture surfaces is not present, the situation is entirely different and much more difficult, and the results of treatment are much less satisfactory.

MATERIAL

A study of 100 consecutive patients with fractures of the surgical neck of the humerus who were treated at the Edward J. Meyer Memorial Hospital in Buffalo, New York, during the six-year period from 1951 through 1956 is herein discussed. Most of these were elderly patients admitted to the "house service," and a high percentage of them also had serious cardiovascular and pulmonary disease. This was the reason for hospitalizing 70 per cent of a group of patients with a type of fracture which usually would not require admission to a hospital. The remaining 30 per cent were treated on an ambulatory or out-patient basis. Seventy-five per cent of the patients were fifty years old or over. The youngest patient was three years of age, and the oldest was ninety-three. Eighty-six of these patients had a contact type of fracture while only fourteen