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PRIMARY HEMIARTHROPLASTY FOLLOWING SEVERE PROXIMAL HUMERUS FRACTURE DISLOCATIONS WITH IRRETRIEVABLE HUMERAL HEAD IN YOUNG PATIENTS

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Neer first popularised the use of primary hemiarthroplasty to treat complex proximal humerus fractures, especially when the humeral head is nonviable or not reconstructable with internal fixations, and with younger patients. A 16-year-old boy had a motor vehicle accident and sustained a closed right proximal humerus fracture dislocation without neurovascular injury. Intraoperatively, due to difficulty retrieving the humeral head which dislocated and positioned behind the clavicle, hemiarthroplasty was done to avoid injuring the brachial plexus, vessels and lung. Mr Y, a 34-year-old man similarly sustained closed left proximal humerus fracture dislocation with an irretrievable head. He too underwent hemiarthroplasty. Both patients were followed up for a year with no pain and fairly good range of movement and muscle power. In complex proximal humerus fractures, there is still debate regarding primary hemiarthroplasty. There are risks of secondary displacement of fracture fragments and head necrosis after internal fixation. Neer and Cofield reported over 90% patients had relief of pain and 66% patients had free range of movement post hemiarthroplasty. Other authors described primary malposition and subsequent migration or deficient osseous integration as a complication after prosthesis. In a thirteen-year observational cohort study of 163 patients with hemiarthroplasty, the overall rate of prosthetic survival was 96.9% at one year, 95.3% at five years, and 93.9% at ten years. Of the factors that were assessed, the age is most important due to factors such as degenerative changes in the rotator cuff, osteoporosis, and motivation to achieve a good range of motion. Successful treatment of acute proximal humerus fractures with prosthetic replacement is challenging to orthopaedic surgeons as it requires proper patient evaluation, good surgical technique, especially in soft-tissue tensioning and stability, and meticulous rehabilitation. In young patients with good bone quality and irretrievable head, hemiarthroplasty is a choice.