Management of clavicle nonunion and malunion.

Abstract: Clavicle fractures are common injuries of the shoulder girdle and occasionally result in nonunion or symptomatic malunion. When present, these chronic injuries can result in considerable shoulder dysfunction. A number of surgical techniques have been described for the management of these injuries. Current literature suggests that supplemental bone grafting may not be necessary in all cases but should be considered in the setting of atrophic nonunion. However, optimal treatment is controversial, as discussed in the literature. This article highlights the current treatment options based on the existing literature and describes our preferred techniques. We carried out a comprehensive review of the PubMed and Medline databases using multiple keywords (e.g., clavicle fracture, clavicle nonunion, and clavicle malunion) to identify the relevant literature regarding this topic. Reference lists of the relevant articles were reviewed for additional important articles. Nonunion and malunion of the clavicle remain challenging problems. Reliable bony union and improved shoulder function can be expected with thoughtful surgical planning, appropriate implant choice, and meticulous surgical technique.