Traumatic posterior sternoclavicular joint injuries are rare. However, several injuries associated with this area are common and include bicipital pitches compression, sternoclavicular dislocation, and subclavian artery injury (Figure 1). Among these injuries, sternoclavicular dislocation poses a risk of compromise to brachial plexus, subclavian artery, and great vessels (Figure 2).

INTRODUCTION

Between 1976 and 1993, 34 patients with a traumatic posterior sternoclavicular joint injury were treated at our institution. Eight of these patients were treated for an anterior dislocation, whereas 26 were treated for a posterior dislocation involving the sternoclavicular joint injuries (Figure 3). It is important to note that only closed reduction was attempted in all patients, with only two patients treated surgically (36). All patients were men, with an average age of 48 years, ranging from 18 to 71 years (Table 1). The average follow-up was 4.9 years, ranging from 0 to 15 years.

METHODS

Between 1976 and 1993, 34 patients with traumatic posterior sternoclavicular joint injury were treated at our institution. Eight of these patients were treated for an anterior dislocation, whereas 26 were treated for a posterior dislocation involving the sternoclavicular joint injuries. The majority of these injuries occurred in young men, with an average age of 48 years, ranging from 18 to 71 years. The average follow-up was 4.9 years, ranging from 0 to 15 years (Table 1).

RESULTS

Operative treatment directed toward the reapproximation of the ligaments was highly successful, and obviated the need for operation. Patients who failed closed reduction obtained good results with operative treatment aimed at reapproximating the ligaments to the medial clavicle (36). After closing the periosteum, the sternoclavicular joint can be reapproximated with several nonabsorbable sutures (Figure 5). We used interrupted nonabsorbable sutures (Figure 5) to repair or reconstruct the costoclavicular joint. In the shoulders in this series, the costoclavicular ligaments were found to be intact on the periosteal sleeve and repair of the periosteum was to be performed around the medial clavicle and secured to the remaining intact costoclavicular ligament (36).

DISCUSSION

The treatment of traumatic posterior sternoclavicular joint injuries is challenging due to the potential complications associated with these injuries. The management of these injuries involves a multidisciplinary approach, and the treatment strategy is determined by the specific injury pattern and the patient's clinical status. The treatment options include closed reduction, operative treatment, and rehabilitation. Operative treatment is indicated in cases of unreduced posterior dislocation, malunion, or nonunion of the posterior clavicle, as well as in cases of recurrent dislocation.

Overall, the treatment of traumatic posterior sternoclavicular joint injuries is successful, and the outcomes are favorable. The majority of patients achieved good results with operative treatment aimed at reapproximating the ligaments to the medial clavicle. After closing the periosteum, the sternoclavicular joint can be reapproximated with several nonabsorbable sutures. This approach is highly successful and obviates the need for operation. Patients who failed closed reduction obtained good results with operative treatment aimed at reapproximating the ligaments to the medial clavicle.