What Is Your Preferred Treatment for Chronic Symptomatic Winging?

We prefer a dynamic stabilization surgery such as the split pectoralis major tendon transfer. This procedure is well described in the literature and has shown excellent results in published studies.\textsuperscript{3,6-9} In this procedure, the patient is positioned in the lateral decubitus position, supported on a beanbag. A concealed axillary incision is used, spanning 4 cm in the axillary skin fold directed toward the lateral border of the coracoid process. The deltopectoral interval is identified and the cephalic vein is mobilized laterally with the deltoid. The sternal head of the pectoralis major, which lies deep to the clavicular head, is isolated, detached from its humeral insertion, and mobilized medially. It is secured with a no. 2 nonabsorbable suture passed with a Krackow configuration (Figure 21-2). It is important to avoid damage to the long head of the biceps during release from the humerus and it is critical to mobilize no further than 8 cm medially to avoid damage to the lateral pectoral nerve, which has been reported to result in recurrent winging after transfer.\textsuperscript{10,11} Appropriate release and mobilization will typically yield sufficient tendon length to reach the medial border of the inferior scapula primarily without the need for spanning soft-tissue graft. A second 4-cm longitudinal incision is then made posteriorly at the inferomedial border of the scapula. This is carried to fascia, and the soft-tissues posteriorly (infraspinatus and teres minor), medially (rhomboid major), and anteriorly (serratus anterior and subscapularis) are subperiosteally elevated off the scapula, skeletonizing the inferomedial angle. The tunnel for tendon passage is created bluntly, staying immediately against the chest wall to avoid damage to the more lateral nerves and vessels in the axilla. A curved Kelly is passed from posterior to anterior to retrieve the sutures.

\textbf{Figure 21-2.} (A) Sternal head of pectoralis major is released from its humeral insertion and a nonabsorbable no. 2 suture is placed in Krackow configuration to secure it. (B) Pectoralis is transferred along the chest wall posteriorly to the inferior angle of the scapula using a long curved clamp. (C) The transferred pectoralis tendon is secured to the inferior angle of the scapula through drill holes.