FOX VALLEY ORTHOPEDICS

Acromioclavicular Joint Reconstruction (Modified Weaver – Dunn)

Surgical description

The Acromioclavicular Joint Reconstruction, or Weaver-Dunn procedure, is used to treat a patient with a *painful* and *unstable* acromioclavicular (AC) joint following a shoulder separation injury. This surgery is typically done after prolonged, unsuccessful, non-surgical management of a grade 3 AC separation, but occasionally is performed on an acute injury.

An incision is placed over the distal clavicle near the AC joint. The delto-trapezial fascia is incised along the distal clavicle and over the anterior acromion. A resection of the lateral 2 cm of distal clavicle is performed (Mumford Procedure) to assure decompression of the AC joint. The coracoacromial (CA) ligament is released from the anterior acromion and that end of the ligament is transferred to the lateral end of the clavicle. The ligament runs vertically and slightly posteriorly from its origin on the coracoid to its new insertion on the clavicle. This orientation somewhat replicates the ruptured coracoclavicular ligament so that the superior and posterior displacement of the distal clavicle that occurs with AC separation is resisted/prevented following the repair. The ligament is secured into the end of the clavicle with sutures. Since this CA ligament transfer is fragile, the repair must be reinforced with supplemental fixation between the coracoid and clavicle. This is most often accomplished with heavy sutures, but, may also be done with surgical tape or a screw placed so that the distal clavicle is held in a *reduced position* relative to the coracoid while the CA ligament transfer heals and scar tissue matures.

This reconstruction is fragile. Early active use of the arm is avoided in order to prevent stretching or disruption of the CA ligament transfer

Philosophy of rehabilitation

The rehabilitation program following a modified Weaver-Dunn may be divided into three phases. Phase I comprises a period of four weeks in sling to protect joint and promote healing. Phase II consists of shoulder range of motion and resistive strengthening. Phase III focuses on the functional return back to sport and/or work activities.

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Modified Weaver-Dunn PT Protocol
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This reconstruction is fragile. Early active use of the arm is avoided in order to prevent stretching or disruption of the CA ligament transfer. PT starts around 4 weeks post-op

Phase I
(0-4 Weeks)
Clinical Goals
- Pain-free ADL's

Testing
- None

Exercises
- This phase is strictly a protective phase and does not involve any rehabilitative exercise. The shoulder is immobilized in a sling. Patients are allowed waist level and hand to face activities at this time.
- Ice to prevent pain and swelling.

Clinical Follow-up
- Patient will return to see the physician 10 days post op, and 1 month post op. Physical therapy starts at 4 weeks post op.

Phase II
(1-3 Months)
Clinical Goals
- PROM, AAROM, AROM
- Pain-free ADL's

Testing
- Bilateral ROM
- Manual muscle testing (MMT) of shoulder strength

Exercises
- The patient will d/c the sling at 1 month post op and begin using arm for light ADL's
- ROM may be initiated at this time, but end–range flexion, abduction, and external rotation at 90° of abduction should not be forced.

- Flexion and external rotation in neutral may be worked on using doorway stretches and/or wand exercises.
- IR behind the back can be worked on cautiously with gentle towel stretches.
- Strengthening exercises are implemented using theratube or light dumbbells. Flexion and abduction strengthening should remain at or below 90° of elevation. ER and IR strengthening should remain in a neutral position.

Phase III
(3 to 6 months)
Clinical Goals
- Restore normal strength
- Return to unrestricted work or athletic activities

Testing
- Bilateral ROM
- MMT

Exercises
- The focus of this phase is on the functional return of the patient back to his or her prior level of activity.
- The patient will be able to utilize heavier weight with exercise and may begin weight room activities. Strength exercises at or above 90° may be implemented as long as they are pain free.
- Implementation of a sports specific functional progression is appropriate at this time
- Note that overhead athletes will begin their return to sport more toward the end of this phase.
- The patient is discharged once they have full ROM, normal strength, and resumed full pain free, activities.

Clinical Follow-up
- As needed during the phase as determined by the therapist and/or physician.