ELLIOTT BOUTONNIERE RECONSTRUCTION

INDICATIONS
- Complete disruption of the central slip where full PROM of the PIP joint has been maintained.

SURGICAL PROCEDURE
The extensor mechanism is exposed. An incision is made between the central slip and lateral bands. Adhesions are released between the extensor mechanism and the periosteum. The PIP joint is brought into full extension and a K-wire is secured across the PIP joint for stabilization. Once the PIP joint is in neutral, the DIP joint is held in slight flexion to allow balancing of the extensor mechanism prior to suturing the central slip. The lateral bands are mobilized and brought out of their volar displacement. The triangular ligament is repaired. Following tendon repair, the DIP joint is taken through a full passive range of motion to determine if the ORL should be released. If DIP joint flexion is limited, the ORL is released.

Elliott, RA. Boutonniere Deformity In: Symposium on the Hand Vol. III. Edited by Cramer, LM, Chase RA, Mosby, St. Louis, 1971.

POSTOPERATIVE REHABILITATION
10 – 14 Days Postop
The bulky compressive dressing is removed. A light compressive dressing is applied to the hand and forearm, along with digital level fingersocks or Coban™.

An extension gutter splint is fitted, positioning the PIP joint at neutral for continual wear. A dorsal and volar gutter may be necessary for added support and stabilization of the pin.

Pin care is initiated utilizing hydrogen peroxide at the base of the pin on a daily basis.

Active and PROM exercises are initiated to the MP joint. Passive flexion is initiated to the DIP joint while stabilizing the PIP joint. PROM to the DIP joint in flexion is important to ensure the SORL does not shorten.

4 Weeks Postop
The pin is removed.

AROM exercises are initiated to the PIP joint in both flexion and extension, with emphasis on active extension at the PIP level.

With removal of the pin the extension gutter is re-fitted. The splint is continued between exercise sessions and at night.

6 Weeks Postop
Active-assistive ROM exercises are initiated to the PIP joint.

7 Weeks Postop
Taping and/or dynamic flexion splinting may be initiated to increase composite passive flexion. In particular, dynamic traction may be necessary to mobilize the PIP joint. Dynamic flexion splinting would be worn on an interval basis 4 -6 times a day for approximately 45 minute sessions.

Note: The initiation of PROM exercises and/or dynamic splinting should be postponed or discontinued altogether if an extensor lag greater than 15° develops. Again, this is the type of procedure where therapy must maintain a balance between increasing flexion and extension.

10 Weeks Postop
Extension splinting is discontinued both during the day and at night.

CONSIDERATIONS
- The goal of this procedure is to restore excellent functional extension to the PIP joint. It may not reconstitute full extension to neutral.
- The therapy program must balance achieving ROM in both flexion and extension. It is important to monitor the ROM each visit and adjust the therapy program as necessary.
- It is very difficult to recapture extension once an extensor lag has evolved. Therefore, therapy should prioritize extension over flexion in the early weeks of therapy.