**OPERATIVE TECHNIQUE**

**Exposure**

A transverse skin incision 2 cm distal to the elbow skin crease was made and the lateral antebrachial cutaneous nerve was protected. In acute cases, the retracted biceps tendon and tendon tract were readily identified. With the elbow in full extension and supination, the radial tuberosity was exposed. A cortical window to accommodate the tendon was made with a burr. A drill was advanced across the opposite cortex.

**Fixation of tendon to the Endobutton**

The Endobutton is a 4 x 12mm flat titanium implant developed for graft fixation of ACL reconstruction. The tendon is fixed to the Endobutton with Number 5 Ethibond Bunnell sutures placed in the medial and lateral margins of the tendon (Fig 1).

In one late case an extensive anterior approach was performed and a semitendonosis graft interwoven through the tendon. The Endobutton was then attached to the graft.

**Advancement of the Endobutton**

A straight-eyed needle (trailing and leading) was advanced through the drill hole and through the posterior forearm (Fig 2a). Tension on the lead suture delivers the Endobutton, to the cortical window (Fig 2b). Tension on the trailing suture will lock the Endobutton on the dorsal radius (Fig 2c). Fluoroscopy was used to monitor the position.

**Post-operative management**

A plaster back slab was removed after one week and the patient provided with a sling and advised that the elbow can be mobilised. No heavy lifting for three months.

**RESULTS**

We performed this technique on 11 acute ruptured and 1 delay presentation. All patients were satisfied, returned to activities and had return of grade 5 strength. There were no neurological injuries, synostosis or infections. Average flexion was from 3º to 143º with 81º supination and 76º pronation.

**DISCUSSION**

**Simple Technique:**

The only surgery performed in the depth of the wound is the preparation of the radial tuberosity, which is performed with the elbow in full extension and supination. The tendon is sutured to the Endobutton. At this point it is “prefabricated” and the Endobutton delivers and locks the tendon into position.

**Synostosis:**

R-U synostosis has been reported with the two-incision technique but not with an anterior approach.3,5,7

**Nerve Injury:**

Our dissections and experience demonstrate the anterior approach is safe once in the inflaatory bursa, it is necessary to expose the neurovascular structures.

**Strength:**

The Endobutton is robust and easily accommodates number 5 Ethibond to allow active mobilisation.