Elbow Tendinopathy

(Up to Date)

Shoulder & Elbow Update club (webinar)

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In this session we talk about:

1. the role of
   PRP
   Shock wave
   Acupuncture
   Botox
   Prolotherapy
   in treatment of tennis elbow

2. Indication for surgery
Investigational treatments of unproven benefit
Platelet-rich plasma (PRP)

Contains growth factors that stimulate tissue repair

According to several systematic reviews, the majority of RCTs report that PRP is not an effective therapy.

However, one systematic review and network meta-analysis compared PRP and glucocorticoid injection ➔ relative improvements in pain following treatment with PRP
The inconsistent results are demonstrated by following examples:

1. A RCT of 60 patients ➔ no significant difference in reduction of pain or disability at 3 m in PRP group compared with steroid or placebo (saline). In addition, PRP injection did not have a notable effect on ultrasound appearance of involved tendons.

2. A RCT of 230 patients ➔ no difference in pain scores at 3 m but significant improvements in pain scores at 6 m in PRP group compared with those not administered PRP.

3. A RCT of 100 patients ➔ significant and sustained improvement in function compared with steroid injection. However, these studies were funded in part by a manufacturer of centrifuge.
autologous blood injection is another treatment option that involves injecting a sample of the patient's blood.

Overall, studies are of limited quality.

The relative importance of inflammatory response, dry-needling or growth factors in blood remains unclear.

A meta-analysis comparing autologous blood and steroid injection ➔ steroid provided better immediate pain relief (2-4w) but autologous blood led to improved function and ↓ pain during the intermediate period (6-24 w).
Extracorporeal shockwave therapy (ESWT)

Overall, evidence supporting ESWT is unconvincing & we do not recommend it.

The procedure is generally uncomfortable
Acupuncture

Systematic reviews → insufficient evidence

Results from a few small RCTs suggest acupuncture may provide some short-term relief, but there is no evidence of sustained benefit.
Botulinum injection

Injection of botulinum toxin A at the myotendinous junction is another means of stimulating an inflammatory response.

However it can cause weakness of finger and wrist extensors.
A RCT of 48 patients involved botulinum injections at a location 1/3 the length of forearm, along the course of PIN.

→ Reduced pain relief at rest compared with placebo.

Grip strength did not differ between groups

Weakness of the 3rd & 4th fingers persisted up to 16 weeks
Prolotherapy

Injection of a local irritant to elicit an inflammatory response.

In a RCT of 24 adults → prolotherapy group experienced reduced pain & improved grip strength.

The role of prolotherapy needs further investigation
Sclerosing polidocanol injection

Neovascularity associated with chronic tendinopathy is thought to contribute to pain.

Sclerosing polidocanol injections are an investigational procedure to target neovessels and reduce pain.
Autologous tenocyte injection

Investigational procedure

Only small case series published to date, and further research is needed
INDICATIONS FOR ORTHOPEDIC REFERRAL

Over 90% of cases of elbow tendinopathy can be managed nonoperatively.

We prefer to emphasize physical therapy and avoid surgical referral for 12 months.
Indications:

1. Failure of conservative Tx, including physical therapy, over 12 months
2. Severe pain or dysfunction for a minimum of 6 months
3. Patient uninterested in pursuing nonop. treatment options
Technique:

One retrospective, single-center review for tennis elbow ➔ no difference in outcome among open, arthroscopic, or percutaneous surgical approaches.
● PRP
  Shock wave
  Acupuncture
  Botox
  Prolotherapy all are inconclusive

● Minimum conservative treatment is 6 month