

# Injection Therapy in Muscle injury? Our Perspective



## Why?

- ✓ Rapid muscle regeneration?!
- ✓ Promote better scar formation?!
- ✓ Regulate muscle tone?!
- ✓ Attend players expectations

## Which?

- ✓ Platelet Rich Plasma (PRP)
- ✓ Collagen
- ✓ Actovegin
- ✓ Traumeel
- ✓ Suramin
- ✓ Stem Cells
- ✓ ...

### **STERIODS ARE CONTRAINDICATED!**

Promising results in in-vitro and animals studies but in humans the evidence is still very poor. Their use is based on empirical medicine

## How?

- ✓ Physician experience
- ✓ US guided with meticulous sterile technique
- ✓ No or minor resistance when injecting

## Where?

- ✓ Myofascial, muscular, myotendinous, intratendinous muscle injury
- ✓ As close as possible to the injury (US guidance)
- ✓ When a Gap is present we recommend the substance to be applied at the tops of the injury

## When?

- ✓ Acute injury - after day 3
- ✓ Sub-acute / Chronic injury - if complaints
- ✓ Grade 2 or above (British Athletic Classification)
- ✓ No contraindications for the procedure (mainly skin infection and allergy to product)

## Procedures after injection

- ✓ Instruct the patient for the possibles side effects (mainly anaphylactic reaction and soft tissue infection)
- ✓ Selective rest in the 48 hours after the procedure
- ✓ Don't use NSAIDs. Paracetamol if needed.
- ✓ The repetition of the injection depends on the extent and type of injury

**Hematoma/Serohematoma/Seroma  
is present**

- ✓ Acute/Sub-acute injury
  - Drainage first and without taking out the needle inject the substance not in the cavity, but in tops of the injury
- ✓ Chronic injury (asymptomatic)
  - No invasive procedure
  - Control it with US

Always keep in mind: **Exercise is the gold standard for the treatment of muscle injuries**