

Causative factors in tendon disease

- Multiple factors contribute to the pathogenesis:
 - effects of exercise
 - overuse
 - genetic predisposition
 - metabolic diseases
 - endocrine diseases
 - autoimmune diseases
 - drugs
 - ageing, menopause

Tendon Pain

Bone inserction: entheses

tendon

fibrocartilage

calcified fibrocartilage

bone

Myotendinous junction: prone to injury

Entesis organ : bursae, fat pads and retinaculum

Infiltration with Glucocorticoids

- Reduce tendon derived cell proliferation in vitro
- Reduce extracellular matrix synthesis both in vivo and in vitro in particular type I collagen synthesis
- Provoke collagen necrosis, disorganisation and inflammatory cell infiltration
- **Should be used with caution !**

Adv Exp Med Biol. 2016;920:239-46. doi:
10.1007/978-3-319-33943-6_23.

Dean BJ1, Carr AJ2. The Effects of Glucocorticoid
on Tendon and Tendon Derived Cells.

Where to apply PRF?

- At the bone inserction
- At the myotendineous junction
- Along the synovial lining
- In proximity of the bursae
- Usually where the patient has pain

ROTATOR CUFF TENDINOPATHY

Total	Female %	Male %	Age mean	Positive	Positive after 1 treat.	Positive after more treat.	Follow-up mean
84	71%	29%	65.3	63 (75%)	52 (83%)	10 (17%)	4.5 years

LATERAL AND MEDIAL EPICONDYLOPATHY

Total	Female %	Male %	Age mean	Positive	Positive after 1 treat.	Positive after more treat.	Follow-up mean
51	59%	41%	50	41 (80%)	30 (73%)	11 (27%)	Up to 1 year

SNAPPING FINGER

Total	Female %	Male %	Age mean	Positive	Positive after 1 treat.	Positive after more treat.	Follow-up mean
16	59%	41%	67	10 (62.5%)	9 (90%)	1 (10%)	3 years

PLANTAR FASCIITIS

Total	Female %	Male %	Age mean	Positive	Positive after 1 treat.	Positive after more treat.	Follow-up mean
18	61%	39%	64	13 (72%)	12 (92%)	1 (8%)	3years

Conclusions

- In tendon disease inflammation plays an important role
- Inflammation prevents the process of regeneration
- Hypothesis: PRF inhibits the production of cytokines exerting an influence on immune cells
- **Surgery produces a limited benefit or none, sometimes causing more pain**
- Miniinvasive approaches are justified and costeffective
- The knowledge of tendons-anatomy is fundamental for a correct diagnosis and the use of sonography is recommended
- PRF is a safe procedure without complications and the reported results are encouraging and longlasting
- The use of TCPRF is promising and randomized control trials are necessary