Eklem Hastalıkları ve Cerrahisi
Joint Diseases and Related Surgery

Editorial / *Editöryal*

Eklem Hastalik Cerrahisi
2019;30(3):183-184
doi: 10.5606/ehc.2019.19001

Every new technique either conservative or surgical is good?

Konservatif veya cerrahi her yeni yöntem iyi midir?

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Patellar tendon **seems** to benefit from platelet-rich plasma (PRP) injections, while there is **no proven benefit** for Achilles tendon, rotator cuff pathology, or lateral elbow tendinopathy.[1]

In another study, compared to PRP, **human recombinant epidermal growth factor** caused more increase in healing tissue at neovascularization, tenocyte, fibroblast, collagen, and tissue macrophage levels; **thus it may be a viable option for tendon healing**.[2]

Platelet-rich plasma **could** be a promising bio-active scaffold for the delivery of chondroprogenitors in cartilage healing due to its synergistic effect in supporting cell proliferation, maintaining cell viability and favoring extracellular matrix production.[3]

The combination of intraarticular infiltrations with intraosseous infiltrations of PRP regulates the biological processes of the tissues, reducing the inflammatory environment and modulating the overexpression of biomolecules that generate an aberrant cellular behavior. **Preliminary clinical results are promising, while further research and developing adequate protocols are necessary**.[4]

Due to the limitations of conventional treatments for focal chondral defects of the knee, orthobiologics have **recently become an area of interest**. Orthobiologics used for cartilage defects include bone marrow aspirate concentrate, adipose-derived mesenchymal stem cells, PRP, and micronized allogeneic cartilage.[5]

There is **conflicting evidence** regarding the use of orthobiologics for osteoarthritis and focal chondral defects.[6] **Although positive results are being reported in the pre-clinical setup, more clinical data are required in order to make a conclusion on this new concept**.[7]

The addition of PRP to a poly lactic-co-glycolic acid (PLGA) scaffold with continuous passive motion in osteochondral defects **may be beneficial** for hyaline cartilage and subchondral bone tissue repair. However, **PRP alone** (with or without PLGA implants) is limited to osteochondral defect repair **without significant regeneration**.[8]

Preliminary results in survivorship of patients with early stages of osteonecrosis of the femoral head treated with core decompression in association with mesenchymal stem cells implantation, PRP injection, and synthetic bone graft were good.[9]

Platelet-rich plasma injection **may have** a positive role in the treatment of early stages of steroid-associated osteonecrosis of femoral head in a rabbit model.[10]

In a study, the possible effects of leukocyte concentration in the content of PRP and the administration of PRP using a drug delivery system on chondrocyte proliferation are searched in vitro conditions. Authors showed that leukocyte-rich PRP administered with a delivery system such as hydrogel is **more efficient** than conventional applications of PRP in the treatment of cartilage damage *in vitro*.[11]

In another study, the results indicate that leukocyte-poor PRP may promote tendon healing through anabolic effects while leukocyte-rich PRP **may impair the repair process**.[12]

Finally, **current clinical experience on orthobiologics should be regarded as first steps for**

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Citation:
Atik OŞ. Every new technique either conservative or surgical is good?. Eklem Hastalik Cerrahisi 2019;30(3):183-184.

the new concept of musculoskeletal system healing and is still in experimental stage.[7]

No definitive conclusions can be established about the effects of PRP in such conditions since most studies are **of low to moderate methodological quality and use variable PRP protocols. For these reasons, there is a growing debate regarding PRP's clinical efficacy.**[13]

Orthopedic surgeons should be aware of the ongoing uncertainty about the evidence behind PRP therapies and inform patients about this fact.

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