3

WHICH IS THE BEST SURGICAL OPTION FOR CARTILAGE IN FOOTBALLERS?

Espregueira-Mendes J

Orthopaedic Department, Minho University and Clinica
Espregueira-Mendes, FIFA Medical Centre of Excellence, Porto, Portugal

In the world of sport, football is the most practiced sport with about 300 millions of athletes, which corresponds near to 4% of the world's population. The prevalence of injuries in football players is significant higher than in the general population.
The most common articular injuries are ligament, meniscus and cartilage of the knee, these being the greatest cause of reduced sports performance. The cartilage of the knee (after meniscus and anterior cruciate ligament) is the most frequently injured structure in football players and it´s a major cause for disability and retirement from sport. Cartilage lesions frequently result in pain, swelling and mechanical symptoms such as locking and catching that significantly decrease the athlete's performance.
The surgical treatment is the most common option to repair deep and large the cartilage defect in professional athletes. Nowadays, we have many techniques with good follow-ups in general population. However, to choose which the best option for cartilage repair is, we need to take into account some facts: age, level of sports, injury details (size, local...), athlete´s expectations and others. In short, before cartilage repair, we need to create a patient/athlete profile to promote a good surgical treatment choice. The most common surgical treatment procedures used in footballers are: Micro-Fracture (MF), Autologous Chondrocyte Implantation (ACI), Osteochondral Autograft Transfer (OAT) and osteochondral allograft transplantation.
Several studies are not conclusive as to the best surgical option but all of them have a good average of return rate, between 68-91%. Taking into account the times of sports return, these diverge between 6 and 39 months.
Microfracture is the most common surgical treatment used in this population.
The OAT technique shows good figures as regards to the prospect of sports return (91%), less recovery time (4-9 months), durability (72% until 3 years) and return at the same competitive level (70%). Particularly for small defects. In this regard, we perform osteochondral transplantation (1) using autografts from upper tibio-fibular joint (GUT). This procedure provides good results like usual technique but with no significant comorbidity related with donor site. A sport-specific rehabilitation programme can helps in reducing the sports return time and, at same time, give extra durability to repair technique.
In conclusion, the choice of surgical technique depends on many factors, such as, athlete specific factors, injury location and size, concomitant procedures and others. In spite of restitution of normal hyaline cartilage remains a challenge to accomplish, we have good and evolving treatment options for keeping athletes in the pitch.

References

1. Espregueira-Mendes J, Pereira H, Sevivas N, Varanda P, da Silva MV, Monteiro A, Oliveira JM, Reis RL. Osteochondral transplantation using autografts from the upper tibio-fibular joint for the treatment of knee cartilage lesions. Knee Surg Sports Traumatol Arthrosc 2012; 20(6): 1136-1142