

Early Return to Play in Football Player after ACL Injury: A Case Report

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Abstract : The patient is a 26 year-old male amateur football player from Milan, Italy; (81kg; 185cm; BMI 23.6 kg/m²). He sustained a non-contact anterior cruciate ligament tear to his right knee in June 2021. In September 2021, his right knee ligament was reconstructed using a semitendinosus graft. The injury occurred during a football match on natural grass with typical shoes on a warm day (32 degrees celsius). Playing as a defender he sustained the injury during a change of direction, where the foot was fixated on the grass. He felt pain and was unable to continue playing the match. The surgeon approved his rehabilitation to begin two weeks post-operative. The initial physiotherapist assessment determined performing two training sessions per day within the first three months. In the first three weeks, the pain was 4/10 on Numerical Rating Scale (NRS), no swelling, a range of motion was 0-110°, with difficulty fully extending his knee and minimal quadriceps activation. Crutches were discontinued at four weeks with improved walking. Active exercise, electrostimulator, physical therapy, massages, osteopathy, and passive motion were initiated. At week 6, he completed his first functional movement screen; the score was 16/21 with no pain and no swelling. At week 8, the isokinetic test showed a 23% differential deficit between the two legs in maximum strength (at 90°/s). At week 10, he improved to 15% of injury-induced deficit which suggested he was ready to start running. At week 12, the athlete sustained his first threshold test. At week 16, he performed his first return to sports movement assessment, which revealed a 10% stronger difference between the legs. At week 16, he had his second threshold test. At week 17, his first on-field test revealed a 5% differential deficit between the two legs in the hop test. At week 18, isokinetic test demonstrates that the uninjured leg was 7% stronger than the recovering leg in maximum strength (at 90°/s). At week 20, his second on-field test revealed a 2% difference in hop test; at week 21, his third isokinetic test demonstrated a difference of 5% in maximum strength (at 90°/s). At week 21, he performed his second return to sports movement assessment which revealed a 2% difference between the limbs. Since it was the end of the championship, the team asked him to partake in the playoffs; moreover the player was very motivated to participate in the playoffs also because he was the captain of the team. Together with the player and the team, we decided to let him play even though we were aware of a heightened risk of injury than what is reported in the literature because of two factors: biological recovery times and the results of the tests we performed. In the decision making process about the athlete's recovery time, it is important to balance the information available from the literature with the desires of the patient to avoid frustration.

Keywords : ACL, football, rehabilitation, return to play

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