CHRONIC KNEE PAIN WITH SURGICAL INTERVENTION IN FEMALE VOLLEYBALL ATHLETE

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Background: A 20 year-old junior Division I volleyball player has a history of knee pain since the 8th grade. An arthroscopic debridement was performed prior to her college career revealing chondromalacia patella. The athlete is 190 cm tall and weighs 90.7 kg. Following surgical recovery she had been pain free for an extended period of time. During off-season practice she began rehabilitation for patellofemoral stress syndrome, and in the following months complained of significantly increased pain. The increasing pain with jumping and running became limiting and resulted in the athlete excluding herself from practice on many occasions. Pain began to affect her daily living, which is when this problem was brought to the attention of a physician. She noted a clicking and popping on occasion, and a significant solid obstruction under the skin. Significant crepitus was found deep to the patella. She had 1-2+ effusion under the patella with most of the pain in functional testing occurring at terminal extension of -5°. There was also pain with weight bearing at 30° of flexion. An X-ray was negative, and an MRI revealed a slight signal charge within the patella indicating a bone marrow contusion, edema on the posterior patella; and a large freely floating cartilaginous fragment medial to the patella. The Physician diagnosed her problem as chondromalacia and patellar tendinitis. Differential Diagnosis: Knee Plica Syndrome, Meniscus Tear, Patellar Tracking, MCL tear, ACL tear, Patellofemoral pain syndrome, osteochondritis dessicans, bursitis, chondromalacia patella, patellar tendinitis. Treatment: Athlete began rehabilitation exercises for patellar tendinitis and surgical intervention occurred shortly thereafter. The loose body was removed along with other partly attached segments of cartilage. Athlete was non-weight bearing for one day after which she began range of motion and strengthening exercises. She used GameReady Cryotherapy for 20 minutes twice a day using moderate pressure and maximal cold, for one week post-surgery rehabilitation exercises. Russian electrical stimulation was used on the quadriceps muscle group for 15 minutes daily for this week as well. For the next week, athlete began using interferential electrical stimulation (IFC) with a modulated frequency of 80-150 Hz for duration of 35 minutes daily, along with ice bags, for pain control. Two weeks post-surgery the athlete was cleared to play to tolerance, and used IFC with ice after practice. Pain at this point was primarily in the patellar tendon with swelling and aching posterior to the patella. From this point on, the athlete received ultrasound and friction massage prior to practice for patellar tendinitis and ice and electric stimulation after. Pain completely subsided from chondromalacia and pain inferior to patella was her sole complaint. Uniqueness: This athlete received two identical operations, which lends evidence to the conclusion that this injury is degenerative and may not completely be asymptomatic until cessation of play. Also, the patellar tendinitis and chondromalacia occurred simultaneously, leading to the question of the relationship between the two injuries. The size of the fragment of cartilage removed from the knee was also larger than in most cases of chondromalacia. Conclusion: This athlete has been suffering from knee pain for over 9 years and with two surgical interventions is still in a similar position. Chronic knee pain of this nature is difficult to treat and may lead to the curtailing of many athletic careers if a sound intervention is not discovered.