Teaching Interpersonal Communication Skills in Athletic Training Professional Programs: A Mixed Methods Study

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Recommended Citation
DOI: 10.25035/jsmahs.04.01.12
Available at: https://scholarworks.bgsu.edu/jsmahs/vol4/iss1/12
OBJECTIVE
The goal of this case was to return a patient to sport following a medial patellar-femoral ligament reconstruction. The patient was a 20 year-old male, transfer (junior standing), Division III football player (wide receiver).

MEDICAL HISTORY
The patient had a history of repeated left patellar subluxations, which was treated with medial patellofemoral ligament (MPFL) reconstruction and chondroplasty on 5/18/17. The patient reported attending physical therapy in the time between surgery and football pre-season. The patient also had a history repeated right ankle sprains. He reported to the AT staff on 8/10/17 after being referred directly from the pre-participation exam. At this time, the patient complained of generalized knee pain, feelings of weakness and instability, and tightness over his pes anserine surgical incision. A note from his physical therapist had cleared him for running without cutting, but the patient reported feeling too weak to do so. Upon evaluation, he was found to have mild effusion, full active and passive ROM, and 3/5 left quadriceps, hamstring, hip flexor, and gastrocnemius/soleus strength as graded by manual muscle testing. These muscle groups were graded as 5/5 on his right side. After evaluation by the AT staff, the patient was referred for physical therapy with the team physical therapist, with home exercises to be supervised by the AT staff.

DIFFERENTIAL DIAGNOSIS
A differential diagnosis for this patient included osteochondritis dissecans (OCD), ACL sprain, chondromalacia, and MPFL tear. OCD, chondromalacia, and MPFL tear were ruled in by arthroscopy. An avulsion fracture of the MPFL from the patella was also noted on MRI and x-ray. An ACL sprain was ruled out by MRI and arthroscopy.

RELATED LITERATURE
According to Errigo-Vitale et. al (2016), the patient should have been able to perform multiplane functional movements when he reported to the AT staff (11 weeks post-op). He was unable to do any of these tasks upon initial evaluation. Ménétrey et. al (2014) state that return to play would require full ROM, no pain or effusion, 85% hamstring and quadriceps strength, and sufficient dynamic stability as measured by functional testing.

TREATMENT
The patient's rehabilitation consisted of four phases. The first phase included quadriceps, hamstring, hip flexor, and gastrocnemius/soleus strengthening in the frontal and sagittal planes as well as static proprioception. The second phase added strengthening in the transverse plane and light plyometrics. The third phase progressed these exercises but added jogging and ankle strengthening exercises due to right ankle instability that began to cause discomfort as intensity increased. In the fourth phase the patient was released from physical therapy and cleared for all non-contact football activities. During this time, the patient worked...
with the ATC on heavier plyometrics and functional exercise. This phase was limited to four visits as the patient elected to pursue interests other than football.

**DEVIATIONS**
The patient’s initial post-op physical therapy did not follow MPFL reconstruction protocol in the literature, as evidenced by the patient’s reports and prevalence of symptoms at this stage in his rehab. The patient’s ankle instability required modifications to his rehabilitation as well in the later phases. The patient also lacked confidence in his ability to perform functional movements, even after his strength had significantly improved, as evidenced by his verbal reports and patient-reported outcome measures. His Y-Balance functional testing scores for return to play also had to be carefully considered as his right leg had a composite score of 112%.

**CONCLUSION**
On 10/13/17, the patient was cleared for all non-contact football activities, and fully cleared by his surgeon on 12/20/17. He met all the return to play criteria set by Ménétrey et al (2014), with dynamic stability assessed by the single leg hop for distance, Lower Extremity Functional Test, and Y-Balance test. His final left composite score for the Y-Balance test of 106% was classified as sufficient for return to play even though his right leg had a score of 112%, as achieving such equivalent scores was deemed impractical and unnecessary for proper function in his case. This case suggests that best clinical practice for AT is to treat the whole patient, including the entire kinetic chain and each patient’s unique psychosocial aspects. It is also important to refer to a professional with sports medicine experience for post-op rehab if hoping to return to sport. Evidence-based practice in AT often focuses on the use of clinical experience and evidence from research, but it is important to incorporate patient values as well for best patient outcomes. In this case, the patient found that he did not care to return to full pre-injury function, and the later stages of his rehab were tailored to reflect this.

**REFERENCES**

**KEYWORDS:** medial patellofemoral ligament, reconstruction, knee rehab