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Roberta Gregory-Davis

Rachael Krjcovic

Ryan Deana

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## ***Distal Femur Osteotomy in Collegiate Field Hockey Goalie***

Roberta Gregory-Davis; Rachael Krjcovic; Ryan Deane MS, ATC, CES

Division of Athletic Training, Kent State University

### **OBJECTIVE**

To examine a unique injury in the field of Athletic Training.

### **MEDICAL HISTORY**

The patient is an 18 year old female, collegiate Field Hockey goalie. In high school the patient primarily focused on indoor and outdoor Field Hockey. She began suffering from patellofemoral injuries in elementary school, where her patella began to subluxate. Over the years she has had more trouble with her right joint compared to her left. Her right patella has subluxed over ten times and has even dislocated. Her primary surgeon had her tested for juvenile arthritis, limes disease, and heart pathologies which all came back negative. The patient had a lateral release and the Fulkerson Process, realignment surgeries, on both of her patellofemoral joints. During her first collegiate season the patient experienced extreme pain and swelling in her right joint, interfering with her ability to actively extend and flex. To relieve the pain and swelling the patient completed rehab exercises along with modalities such as GameReady. In the later part of the season the joint capsule was drained of excess fluid and she was administered a cortisone shot per the team doctor, which only had short term effects.

**DIFFERENTIAL DIAGNOSIS** Osteoarthritis, Patellar Instability

### **RELATED LITERATURE**

Although there is not much research out about distal femur osteotomies because it is a rare surgery that occurs, research has shown that there has been a significant decrease in pain following a distal femur osteotomy because of

the significant improvement seen in mechanical alignment.<sup>1</sup>

### **TREATMENT**

Since the patient still continued to experience signs and symptoms after the previous attempts the patient was referred to her primary surgeon. Her primary surgeon decided to perform an osteotomy on her femur. She is currently completing post-surgical rehab in the hopes of returning to activity next season.

### **UNIQUENESS**

This is a unique case because the patient has underwent multiple surgeries, which do not often occur, to realign her patella at such a young age. The Fulkerson Process is an osteotomy and anteromedialisation of the tibial tuberosity. The procedure for a distal femur osteotomy includes cutting the distal femur and correctly rotating the femur to allow for proper patella tracking. A wedge, cement block, is placed between the part of the femur that was cut and the tibia. The tibia was also rotated properly to allow for proper patella tracking.

### **CONCLUSION**

Although other options should be tried before surgical interventions, an effective way to fix mechanical realignment for the patella could occur through a femur osteotomy.

### **REFERENCES**

1. Swarup, I., Elattar, O., & Rozbruch, S. R. (2017). Patellar instability treated with distal femoral osteotomy. *The Knee*, 24(3), 608-614. doi:10.1016/J.KNEE.2017.02.004

**KEY WORDS:** *patellar instability, Fulkerson Process, femur osteotomy*