

第77回東伏見スポーツサイエンス研究会

日時 2022年12月22日(Thursday) **9:00~10:30 am (Japan Time)**
場所 オンライン開催(Zoom、詳細は案内メールに記載)

演題

Quadriceps strength and knee loading following anterior cruciate ligament reconstruction (ACL-R).

Dr. Shiho Goto, PhD, ATC (Texas Health Sports Medicine, USA)

■**Abstract:** Anterior cruciate ligament (ACL) injury is a common injury among active young populations. High recurrence rate, decreased level of activity, and early development of knee osteoarthritis have been reported as both short- and long-term problems following the injury. Demonstrating optimal quadriceps strength and knee loading is one of the key factors to minimize risks for these complications, however, majority of patients with ACL-R were not able to restore these functions prior to return to sport. The altered quadriceps strength and the lower extremity mechanical loadings have been observed as early as before surgery and persist years after the initial surgery. However, examination of these function is usually conducted at a time of return to sport activities (RTS; 6-8 months following surgery) and there are limited research studies investigating these functions during the early phase of rehabilitation. Thus, it is important to identify how quadriceps strength and mechanical loading change in the early phases of rehabilitation to design effective rehabilitation program for patients with ACL-R. In addition, clinicians' approach to patients with ACL-R can also play an important role in their psychological readiness. In this presentation, I will discuss the importance of restoration of the quadriceps strength and knee loading and their relationships, and how we can approach to patients for better outcomes.

■**Bio:** Dr. Shiho Goto, PhD, ATC. is a Clinical Biomechanist at Texas Health Sports Medicine since 2015. Her research has been focused on understanding biomechanics with acute and chronic sports related knee injuries and identification of factors associated with these biomechanics. Currently, she is conducting research studies on young active athletes with ACLm reconstruction with an intention of optimizing rehabilitation following anterior cruciate ligament reconstruction (ACL-R) across the continuum of care.

