QUESTION 3

How Do You Manage a Combined ACL/MCL Injury?

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The anterior cruciate ligament (ACL) prevents anterior translation of the tibia on the femur and contributes to resistance to internal and external rotation while the knee is extended. It is a secondary stabilizer to valgus stress in full extension. The medial collateral ligament (MCL) resists valgus stress at 30 degrees of knee flexion. It also contributes to limiting anterior and posterior translation, as well as rotation, of the tibia. Thus, when both ligaments are disrupted, the knee can become unstable in several planes of function.

MCL injuries are classified as grade I, II, or III, as described by the American Medical Association's *Ligament Injury Classification*.[1] A grade I injury indicates a microscopic tearing of the ligament without laxity. A grade II is a partial tear of the ligament with some joint widening but not a complete disruption. On physical examination, there remains a firm endpoint on valgus (abduction) testing. A grade III injury implies loss of integrity of the ligament, with medial joint widening and a soft or nonexistent endpoint upon valgus (abduction) stress.

ACL rupture along with MCL rupture can seriously compromise joint stability.[2] These injuries can be difficult to treat. Multiple studies have shown that concomitant ACL reconstruction and MCL repair can lead to postoperative arthrofibrosis. However, persistent valgus instability in cases when the MCL is not repaired can compromise the results of the ACL reconstruction. Thus, I have developed this algorithm:

- When a patient has a grade I MCL injury with concomitant ACL disruption, I treat this as an isolated ACL and reconstruct the ACL as soon as full range of motion is achieved.
- In grade II MCL injuries, I treat the patient in a hinged knee brace for 3 to 6 weeks, achieve full range of motion, and reconstruct the ACL when motion returns and valgus stability is established.