# Ankle sprain

An Ankle Sprain of a Female Colligate Basketball Player Objective: To introduce acase studyabout a mild ankle sprain. Background: The most common way to sprain an ankle in basketball is to step on someone else’s foot, or to plant and to turn the wrong way. Differential Diagnosis: Could be an injury to the deltoid ligament, CF, or the ATF ligament. Treatment: Ice, High volt, Theraband, Towel scrunches, Towel stretches, Whirlpool Conclusion: Rehab will help her get her strength back in her ankle as long she continues to work hard. Keywords: Ankle sprain, High volt, Medial and Lateral Malleolus

Objective The ankle joint is the most commonly injured part of the lower leg. It happens from an unusual twisting action when the foot is planted awkwardly or when running on uneven ground. An unbearable amount of force is placed on the joint itself. Such injuries occur all the time in athletics or just by running. The ankle is made up of bones, tendons, and ligaments. The major bone of the lower leg is the tibia; it holds most of the body’s weight. It is made up part of the medial malleolus, which consist of the inside up hump of the ankle.

The fibula is the next largest of the ankle bone in the lower leg. It forms the lower leg end form the lateral malleolus, the outer hump of the ankle. The smallest ankle bone is the talus which completely makes up the bone on the top of the foot. The tendons connect the muscle to the bones. There are several muscles that help control motion at the ankle. The tendon connects one or more of the bones to the foot. Tendons can be stretch to torn when a great amount of tension is placed upon it. They can also be pulling away from the bone, such as the Achilles tendon rupture.

Ligaments provide connections between the bones. Ligaments are mostly sprained. The ankle has many bones that comes together to form the joint. The most commonly injured ligament is the anterior talofibular ligament that connects the front of the fibula to the talus bone on the front outer rim of the ankle joint. Ligaments are sprained when a great than normal force is placed on it. This is done when the foot is inverted most of the time. This happens when the foot is awkwardly planted or is stepped upon during activities.

Stepping in a surface that is irregular, such as in an athletic event when one player steps on another player foot a sprain can result. Background A twenty-one year old female, basketball player experienced an ankle sprain by accidentally stepping on another player's foot. The player was going up to make a shot landed on the opponents foot when she came back down, which made her ankle invert. The head athletic trainer evaluated her then taped her ankle to provide support and keep the swelling to a minimum at that time, so the player could return to play.

Immediately after the game, the player's ankle was iced down to control the swelling and was receiving NSAID's to help with the pain or discomfort she was feeling. The player was referred to the team physician for x-rays and MRI to help rule out fractures. Treatment was started to help relieving the swelling and pain. Treatment In the first couple of days of rehab, she received high volt, and ice to help with the swelling she also did ankle pumps that also help with moving out the inflammation. As each day went by, towel scrunches, towel stretches were performed as three set each.

Compression pumps were administered for 15 minutes several times a week, rhythmic stabilization, and aquatic therapeutic exercises were added as she got closer to the sub acute phase. The sub acute phases are about six days to until six weeks. In this stage she was allowed to jog straight ahead, trying wide figure-eight at first. Eventually the player was either on the bike or the stair stepper for 10 minutes a day. After the bike she was moved to the shuttle press with four cords, and three sets of ten, after the shuttle she did calf raises. The farther she progressed, the whirlpool was introduced, and both hot and cold water.

Two set of tens, in all four directions using Therband was the next step of treatment; ultrasound was done to help break up scar tissue that had started to form. As her ROM improved along with other tests, she was moving closer to the return to play phase. The return to play phase this is when functional test and sport specific drill can be started. Functional testing is important along with continuing with other exercises and modalities. She moved to three set of fifteen with a Therband in all direction, hot pack assisted with high volt was added.

Following the Therband the shuttle with the dynadisc, doing three set of fifteen along with four cords, she also did towel scrunches five times; wobble board, marbles and exercise. ROM exercise was done to increase plantar flexion and dorsiflexion. Differential Diagnosis There are many kinds of ankle injuries that can be present in variety of ways. The calcaneocuboid joint injury is a kind of inversion ankle sprain that involves the ligament overlying that joint. Which cause immediate swelling, pain and tenderness to the touch? The pain is localized to that region of the joint.

The deltoid ligament resists abduction and lateral rotation of the ankle. However sudden forceful motion of the ankle may tear the ligament orstressit. The ligament may avulse that is attacked to the malleolus; a vast majority of case, there will be a tear through the ligament. The tear could be associated with compression of the talar joint. There could be an injury also to the ATFL and the CF ligament. Conclusion The player went through all the appropriate phases to get back in to the return to play phase. She will continue to do rehab so that her ankle with improve and get stronger.