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The use of autologous stem cells in the treatment of a soccer player with ankle AVN

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The treatment of avascular necrosis (AVN) can be a difficult dilemma for the clinician. When avascular necrosis (AVN) occurs in a competitive athlete the situation can easily become the end of a sporting career. This case will reflect the difficulties encountered when the early diagnosis of AVN is critical and various treatment options are suggested by different health care providers. The ramifications of these recommendations also impact upon the future goals of the athlete. A teenage soccer player injured her ankle while playing soccer. This was initially felt to be a simple ankle sprain that failed to resolve with conservative measures including, rest, ice, elevation and anti-inflammatories. Subsequent x-rays failed to reveal bony abnormalities. Running and playing soccer were unable to be continued secondary to pain and swelling. An MRI was obtained which revealed AVN of the navicular bone without joint or bone degeneration. Two orthopedic surgeons were consulted and both recommended discontinuing soccer and having an ankle fusion. This option was unacceptable to the patient and her family. Alternative strategies were explored and the option of utilizing autologous stem cells was considered. The patient and family consulted Dr. Dennis Lox and it was determined she was a reasonable candidate for autologous stem cell injection as an alternative treatment to having her ankle fused. This was done and she responded favorably. Her pain and swelling subsided. Repeat MRI's were consistent with some resolution of her area of AVN. At 6 months she returned to competitive soccer play. The following year she was the leading scorer on her team and being scouted by Division I colleges. This case reflects the ability of Regenerative medicine to alter the consequences of irreversible surgical interventions. In this case, the surgical option of ankle fusion would have ended the patient's sports career, and as a teenager girl, the psychosocial implications of an ankle fusion may have lasting effects.

Biography

Dennis Lox practices Sports and Regenerative Medicine in the Tampa Bay, Florida and the Washington D.C. metro areas in the United States. Dr. Lox has treated numerous patients with AVN. As well as patients from all levels of sports competition including the professional ranks. Lox frequently presents his findings at national and International Conferences on Regenerative Medicine and Tissue Engineering.

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