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Cutting edge concepts in the use of stem cell and PRP injections in an office setting

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The presentation concerns PRP and Stem Cell (both bone marrow and adipose) injections for musculoskeletal conditions in an office setting. Indications are given as to which type of cell and technique to use to accomplish repair. Stem cells, both bone marrow derived (BMAC) and adipose, are used for the more difficult problems. PRP injections are utilized for the less severe problems. Indications are given when to use Stem Cells versus PRP and when to use both. The newest concepts in stem cell science are presented. These concepts include the clinical use of MUSE cells, exosomes and Blastomere like stem cells. Basic science of both PRP and stem cells are discussed. This presentation defines what constitutes an effective PRP preparation. Myths concerning stem cells are dispelled. One myth is that mesenchymal stem cells are the most important stem cell. This was the initial interpretation of Dr. Arnold Caplan the father of mesenchymal stem cell science. Dr. Caplan now feels that MSCs have an immunomodulation capacity which may have a more profound and immediate effect on joint chemistry and biology. We now learn in the talk that the hematopoietic stem cells are the drivers of tissue regeneration. Also discussed are adjuncts used which enhance the results. These therapies include supplements, LED therapy, lasers, electrical stimulation and cytokine therapy. The scientific rationale is presented for each of these entities as to how they have a direct on stem cells.

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Joint preserving surgery for hallux valgus in rheumatoid arthritis with minimum 2-year follow-up

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Introduction: To date, arthrodesis and resection arthroplasty of the first MTP joint are major procedures for the hallux valgus in rheumatoid arthritis (RA) patients. Good clinical results of these procedures have been reported, however, arthrodesis or resection arthroplasty sacrificed the function of the first MTP joint. Recently, because of the introduction of biologics, RA can be well controlled and the function of joints can be preserved. We operate for hallux valgus in RA patients using Scarf osteotomy (joint-preserving surgery) and investigated clinical results of Scarf osteotomy for hallux valgus in RA patients.

Methods: Between April 2011 and September 2013, a total of 44 RA patients (55 feet) who underwent Scarf osteotomy for hallux valgus were followed up for a mean duration of 28 months. All patients were available for follow-up for at least 2 years. X-rays of feet were taken pre and postoperatively at the final follow-up. The angle of the hallux valgus (HVA), M1M2 (M1M2A) and M1M5 (M1M5A) were examined. And the deviation of sesamoid bone was scored using Hardy's classification.

Results: The mean HVA were 48.7 degrees preoperatively and 14.1 degrees at final follow-up. The mean M1M2A were 13.8 degrees preoperatively and 8.8 degrees at final follow-up. The mean M1M5A were 32.4 degrees preoperatively and 22.0 degrees at final follow-up. The position of the sesamoid bone was improved in all cases at final follow-up using Hardy's classification.

Conclusions: Our results show that Scarf osteotomy is a beneficial procedure for hallux valgus in RA patients.

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