

Cell and Stem Cell Research

March 16, 2022 | Webinar

Degenerative osteoarthritis a reversible chronic disease

Valerio Di Nicola

University Hospitals Sussex, UK

Osteoarthritis (OA) is the most common chronic musculoskeletal disorder. It can affect any joint and is the most frequent single cause of disability in older adults. OA is a progressive degenerative disease involving the entire joint structure in a vicious circle that includes the capsule-bursa tissue inflammation, synovial fluid modifications, cartilage breakdown and erosions, osteochondral inflammatory damage leading to bone erosion and distortion.

Research has identified the initial inflammatory-immunologic process that starts this vicious cycle leading to so-called early OA. Research has also identified the role played in the disease advancement by synoviocytes type A and B, chondrocytes, extracellular matrix, local immune-inflammatory mediators and proteases.

This article investigates the joint-resident MSCs that play an essential local homeostatic role and regulate cell turn over and tissue repair. Resident MSCs establish and maintain a local regenerative microenvironment. The understanding

of OA physiopathology clarifies the core mechanisms by which minimally invasive interventions might be able to halt and reverse the course of early-stage OA. Interventions employing PRP, MSCs and exosomes are considered in this presentation.

Speaker Biography

Valerio Di Nicola (VDN) is a surgeon and researcher currently working as consultant in general, emergency, and lower GI Surgery and lead of research and surgical audit at University Hospitals Sussex (UHSussex), NHS Foundation Trust- Worthing Hospital- BN112DH (UK). Further, he is the scientific director of the Regenerative Surgery Unit (RSU), Villa Aurora Hospital-Foligno-Italy. VDN started his career in regenerative medicine research during his PhD in microsurgery (1994-1999) at the Policlinico Umberto I - "Sapienza" University of Rome (Italy). From May 2013 to June 2015, VDN was scientific director of the Interbion Foundation for Basic Biomedical Research. Montedato, CH-6595 Riazino, Switzerland. VDN has recently presented to various international conferences and published his new model of care delivered by the Regenerative Surgery Unit (RSU).

e: valerio.di-nicola@nhs.net*Notes:*