



OSTEOARTHRITIS

The social impact of degenerative diseases such as osteoarthritis is increasing due to continued rise in the mean age of the population and also due to early degenerative changes. Unfortunately the regeneration ability of cartilage is limited and trauma, chronic overload as well as metabolic and biological predisposition may lead to the loss of tissue homeostasis thus resulting in accelerated joint surface damage and eventually end stage arthritis. We do not have evidence based modalities for OA relief to the fullest extent.

Numerous approaches have been proposed as non invasive modalities with the variable success rates but none has clearly shown an ability to alter the natural history of this disease and therefore none can be considered as an ideal procedure. Recently, PRP has been attracting attention as a promising procedure to stimulate repair. Progenitor cells because of the ease with which they can be isolated, their capacity to self-replicate, their ability to differentiate along multiple connective tissue lineages, have become the cell type of choice for cartilage tissue repair. Mesenchymal stem cell [MSC]: CD73, CD90, CD106 etc can form cartilage. When mesenchymal cells reach to joint then they have affinity for damaged articular Cartilage. They have ability to localize the damaged area & participate in repair of not only articular cartilage but also to cruciate ligament and meniscus.

Definitely autologous minimally manipulated MNCs are the ideal one. As minimal manipulation is being done so there should not be any safety concern issues even. Definitely ultimately chondrogenesis is being required in OA knees which can be achieved with MNCs having fewer MSCs or by using MSCs only. Clinical grade mesenchymal stem cells with or without PRP can be used not only in OA but also in chondral lesions due to sports injury. This is the possible correct way to avoid further cartilage degeneration leading to Sec OA. MRI changes post study in OA must be clinically correlated.

The importance of rehabilitation for achieving expected recovery after must not be forgotten and regular follow up must be maintained to access the outcomes.

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