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Retrospective Study

High tibial osteotomy and umbilical cord mesenchymal stem cells for knee cartilage regeneration

Song JS *et al.* hUCB-MSCs and HTO for cartilage regeneration

5 Jun-Seob Song, Ki-Taek Hong, Chae-Gwan Kong, Na-Min Kim, Jae-Yub Jung, Han-Soo Park, Young Ju Kim, Ki Bong Chang, and Seok Jung Kim

Abstract

BACKGROUND

High tibial osteotomy (HTO) is a well-established method for the treatment of medial compartment osteoarthritis of the knee with varus deformity. However, HTO alone cannot adequately repair the arthritic joint, necessitating cartilage regeneration

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Publish Year: 2017

Treatment of Osteoarthritic Knee With High Tibial ...

<https://clinicaltrials.gov/ct2/show/NCT04234412>

Jan 21, 2020 · Procedure: **umbilical cord blood stem cell implantation** for **osteoarthritis treatment**

The **arthroscopic procedure** is performed in the supine position after **spinal anesthesia**. Once the **chondral lesion** is identified through a standard anteromedial and lateral portal, meniscectomy, **meniscal repair**, and lateral retinacular release are performed if necessary. microfracture is ...

Cartilage regeneration in osteoarthritic knees treated ...

<https://www.sciencedirect.com/science/article/pii/S096801601930170X>

A mixture of **sodium hyaluronate** and **human umbilical cord blood-derived mesenchymal stem cells** was implanted in the holes of the right **lateral femoral** and **tibial condyle**. D. The second-look arthroscopic image at 26 months post operation demonstrates **cartilage regeneration** at the right **lateral femoral** and **tibial condyle**.

Cited by: 1

Author: Jun-Seob Song, Ki-Taek Hong, Na-Min Ki...

Publish Year: 2019

Human umbilical cord blood-derived mesenchymal stem cell ...

<https://link.springer.com/article/10.1007/s00402-020-03349-y>

Jan 24, 2020 · This study aimed to investigate the clinical outcomes after human **umbilical cord blood-derived mesenchymal stem cell (hUCB-MSC)** implantation for **medial** com Inclusion criteria were

patients older than 60 years, with a **kissing lesion** of the MC, a full-thickness chondral defect ≥ 4 cm² of the **medial femoral condyle (MEC)**, and a **varus deformity** $\geq 3^\circ$ on a long cassette scanogram



High tibial osteotomy and umbilical cord mesenchymal s



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Knee Cartilage Regeneration with Umbilical Cord Mesenchymal Stem Cells Embedded in Collagen Scaffold Using Dry Arthroscopy Technique. Sadlik B(1), Jaroslowski G(2), Gladysz D(3), Puszczarz M(2), Markowska M(3), Pawelec K(4), Boruckowski D(3), Oldak T(3).

Cited by: 6

Author: B. Sadlik, G. Jaroslowski, D. Gladysz, M. ...

Publish Year: 2017

[Mesenchymal stem cells for cartilage regeneration in ...](#)

<https://www.wjgnet.com/2218-5836/full/v8/i9/674.htm>

MSCs are adult **stem cells** present in various parts of our body, for instance BM, **peripheral blood**, **umbilical cord blood**, **fatty tissues**, **skeletal** and **cardiac muscles**, Wharton's **Jelly** of **umbilical cord**, **facet joints**, **interspinous ligaments**, and **ligamentum flavum** [7-10]. They are primarily isolated from the BM, with major harvesting sites being the **iliac crest**, tibia and femur.

Cited by: 13

Author: Baldur Kristjánsson, Sittisak Honsawek

Publish Year: 2017

[Stem Cells for Knees: Promising Treatment or Hoax?](#)

<https://www.webmd.com/osteoarthritis/news/20170407/...>

Treatment

Retirement

Research

Cost

Uses

Side effects

Many doctors and scientists view the growth of stem cell treatments as very promising. But that growth comes as the FDA debates whether to tighten regulations on stem cell clinics after recent reports of patients suffering severe damage from treatment. The only stem cell-based product approved by the FDA is for umbilical cord blood-derived stem cells for blood cancers and other disorders.

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