l’incapacité fonctionnelle chez les patients gonarthrosiques [1]. L’objectif de
Objectif – Le déficit de force musculaire du quadriceps est déterminant dans
l’incapacité fonctionnelle chez les patients gonarthrosiques [1]. L’objectif de

Discussion – Ces résultats confirment l’impact du déficit de force du quadriceps
– les gonarthrosiques. Cela souligne l’importance du renforcement musculaire
sur les capacités fonctionnelles, telles que la marche et l’équilibre postural, chez

Référence
104.
http://dx.doi.org/10.1016/j.rehab.2013.07.929

Oral communications
English version

CO10-001-e

Arthritis
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Unknown abstract.
http://dx.doi.org/10.1016/j.rehab.2013.07.930

CO10-002-e

Pathophysiology of osteoarthritis
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Unknown abstract.
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CO10-003-e

Articular cartilage regeneration and bioengineering: From biomaterials to stem cells
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Keywords: Cartilage; Biomaterial; Cells
The repair of articular cartilage lesions by the biomaterial-assisted transplantation
of chondrogenic cells is considered with growing interest (Magne et al., 2005; Vinatier et al., 2009). In this context, our laboratory has developed a self-setting
and injectable cellulose-based hydrogel (Si-HPMC) that has been successfully
used as a scaffold for the percutaneous transplantation of autologous nasal
chondrocytes in cartilage defects in rabbit (Vinatier et al., 2005; Vinatier et al.,
2007) and horses (Lallemand et al. submitted). To overcome the limits related to
the harvest of nasal chondrocytes we also have questioned whether adipose-
derived stromal cells (ASC) could represent an alternative source of autologous
regenerative cells (Vinatier et al., 2009). Our recent in vitro and in vivo data
indicate that human ASC are a promising source of cells for the development of
cartilage repair strategies thanks to their ability:
– to differentiate towards the chondrogenic lineage (Merceron et al., 2010 and
2012);
– to form cartilaginous tissue in ectopic site (Merceron et al., 2011);
– to participate, when transplanted in association with Si-HPMC, to the repair of
in vivo articular cartilage defects (Portron et al., 2013).
Taken together, our studies indicate that the transplantation of chondrogenic
cells (chondrocytes or ASC) using an injectable hydrogel could be considered a
promising strategy for the cell-based regeneration of articular cartilage defects.
Whether this concept could also be transposed to the treatment of osteoarthritic
joints and the regeneration of intervertebral disc will finally be discussed
through the preliminary data we have recently generated.
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CO10-004-e

Functional and clinical outcome after self-
management in people with knee osteoarthritis
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Background – Knee osteoarthritis (OA) is a painful condition causing disability
and handicap. Treatment of knee OA consists of a combination of non-

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and handicap. Treatment of knee OA consists of a combination of non-

Aim – The aim of this prospective study was to assess the effectiveness of a self-

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Methods – This study was carried out on patients having consulted in our
rehabilitation department from September 2010 to December 2011 and
included 146 patients aged more than 45 years. All subjects received advice and
information for the practice of specific exercises at home. Exercise therapy was
explained to patients to improve adherence to treatment. Patients were assessed
before treatment, after treatment and at each 3-month follow-up. Outcome
measures included visual analogue scale VAS pain on walking, VAS pain at rest,
range of motion, Western Ontario and Master University Index WOMAC and
LEQUESNE index.

Finings – The mean final outcome measurements were taken after 12-month of
follow-up. The average VAS score for pain at rest dropped from 68 ± 10 to 31 ± 30. The
score for pain during effort fell from 85 ± 13 to 40 ± 30. In 82% of cases, joint
mobility was better at the final assessment. Functional scores were improved.
65% of patients were satisfied. However, functional improvement correlated well with adherence to exercise therapy.

Conclusion – Even when it is done at home unattended, unsupervised and
without expensive equipment, self-management program may be beneficial for
pain and function.
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