



Clinical Weekly - 175th Edition

#JOURNALTUESDAY - by Abi Peck

Stem cell injections in knee osteoarthritis: a systematic review of the literature

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1. Did the review address a clearly focused question?

Yes - Do stem cell injections improve pain and function in knee OA

2. Did the authors look for the right type of papers?

Yes, 2559 studies were reviewed published/unpublished, studies from different countries and different years. 6 studies were the only ones that matched the inclusion criteria.

3. Do you think all the important, relevant studies were included?

Yes

4. Did the review's authors do enough to assess the quality of the included studies?

Yes, two authors independently assessed eligibility using inclusion/exclusion criteria and compared results, it studies were agreed upon a consensus meeting was organised. Two reviewers also independently assessed study bias using Cochrane risk of bias tool.

5. If the results of the review have been combined, was it reasonable to do so?

Studies were reviewed separately and were divided into different stem cell origins for discussion. Each study was discussed and compared for similarities.

6. What are the overall results of the review?

Descriptive statistics were used to analyse the studies. All but one found positive results for pain, patient reported outcomes and MRI scan results favouring stem cell treatment. However, all studies had a high risk of bias and were considered to have an absence in a high level of evidence, so should not be recommended at this time.

7. How precise are the results?

Confidence intervals were variable for studies and some were not reported on.

8. Can the results be applied to the local population?

Ability to generalise the findings to the populations we see. Stem cell treatment should not be considered a valuable treatment alternative at this time.

9. Were all important outcomes considered?

Yes

10. Are the benefits worth the harms and costs?

No serious adverse effects were found in any study at 24 months follow up.

Cost of treatment may be considered a draw back.





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#NEWSOFTHEWEEK - by Liz Wright

1. Interventions to reduce sedentary behaviour in 0-5 year-olds: a systematic review and meta analysis.

Given the negative health outcomes associated with some sedentary behaviours in early childhood, it's paramount to investigate effective strategies to reduce time in these behaviours. Interventions to reduce screen time and overall sedentary behaviour in early childhood have a significant overall effect of 17 and 19 min per day, respectively. Unfortunately few interventions to reduce sedentary behaviour have been conducted in children < 3 years and outside the preschool setting, highlighting the requirement for further research.

<http://bit.ly/2F9gfKX>

2. Foot orthoses for plantar heel pain: a systematic review and meta-analysis.

Moderate-quality evidence was found stating that foot orthoses are more effective at reducing pain than sham foot orthoses in the medium term (7 - 12 weeks). It is uncertain whether this reduction in pain is clinically important for patients, as the effect size was small. There is no evidence to confirm that foot orthoses are effective in the short or longer term at reducing pain or improving function. Additionally this review found no difference between customised and prefabricated foot orthoses, or between soft and firm foot orthotic materials, in reducing pain or improving function. Future trials of a higher quality may change some of the findings of this review however.

<http://bit.ly/2oyD1yw>

3. Insomnia disorder – mechanisms, QOL, diagnosis, outlook and management.

Worldwide prevalence on insomnia is estimated to be 10%. Aetiology remains poorly understood though various factors have been identified which may trigger or perpetuate the disorder. E.g. stressful life events, excessive worry about sleep, poor sleep hygiene, the tendency to internalise problems and irregular sleep schedules. Genes

implicated in insomnia include those that regular circadian rhythm and those related to the activity of neurotransmitters. Hyperarousal while sleeping and awake may contribute also. Insomnia can exacerbate those with other conditions such as cancer, Parkinsons and chronic pain. Overall chronic insomnia has QOL outcomes which resemble major depressive disorders and congestive heart failure. Diagnosis is made on the basis of sleep experience reports, daytime associated impairments (e.g poor memory and concentration, fatigue), dissatisfaction of sleep quality/duration; lasting > 3 days per week for > 3 months. Obstructive sleep disorder, restless leg syndrome and apnoea should be ruled out. Management should be a multifactorial approach involving mindfulness training; CBT, stimulus control (reducing use of technology), relaxation training, sleep restriction/routine, and pharmacological approaches (drugs can be used which modulate activity of sleep regulating molecules, e.g. GABA/histamine/melatonin and orexon). <http://go.nature.com/2Fa2RmQ>





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#FRACTUREFRIDAY BY SCOTT ROWBOTHAM

Arcuate Complex Avulsion Fracture (Arcuate Sign)

The arcuate sign is an avulsion fracture of the proximal fibula at the site of insertion of the arcuate ligament complex. It is usually less than 1 cm in size and is displaced superiorly and medially.

Mechanism of injury

-A direct blow to the tibia when the knee is extended, resulting in posterolateral subluxation of the tibia in external rotation

-Sudden hyperextension of the knee with the tibia internally

90% of cases are associated with cruciate ligament injury

Attachments

The fracture fragment is attached to the lateral collateral ligament, the biceps femoris tendon or both.

Innervation

Common fibular branch of the sciatic nerve

Blood Supply

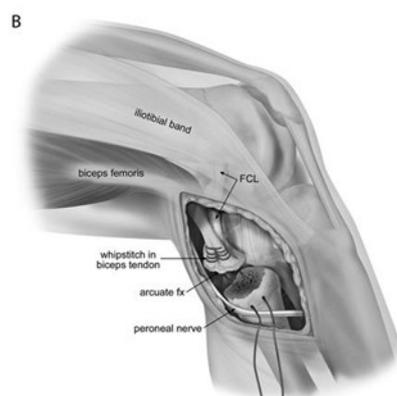
Deep femoral artery

Imaging

Slight internal rotation AP films are usually best to radiographically demonstrate this injury
MRI is normally needed for accurate diagnosis of all structures in the acute phase. If not diagnosed initially posterolateral instability may develop and any cruciate ligament reconstruction may fail.

Rehabilitation

Physiotherapy input will likely be a post-surgical intervention. It will likely include rehabilitation for a posterior cruciate ligament repair and the major stabilisers of the posterolateral corner of the knee due to them being strongly associated with an arcuate complex avulsion fracture.



<https://upload.orthobullets.com/topic/3012/images/arcuate%20fracture.jpg>

